



Each Scholar: A voice. A dream. A **BRIGHT** future.

## Summer Learning for Incoming 9<sup>th</sup> & 10<sup>th</sup> Grade Scholars

We embrace our families and caregivers as vital partners in the education of all our scholars, as reflected in our strategic plan commitment of “schools can’t do it alone”. We care deeply about your child’s academic and social emotional learning.

### Summer Learning Support for Families and Scholars

This summer we will be providing resources and support for scholars to ramp up their learning to prepare for returning next school year. The purpose of this work is to prepare your child for the upcoming grade level and get practice with the upcoming grade level’s skills. You can support your child’s learning by doing the following:

- Share the importance of studying and completing schoolwork so they continue their learning growth
- Provide space/location to allow for quiet practice of skills
- Celebrate the completion of work
- Read together/talk about books

Using the suggested grade level weekly schedule on the next page, scholars will maintain their daily learning practice in reading and math.

**Online Resources:** Login to FWPS Launchpad for access to the following programs: [www.learn.fwps.org](http://www.learn.fwps.org)

- Math (Math 8, Algebra 1, Geometry, Algebra 2) - Mathia
- SORA- This is an online library that has collections of great books for scholars. It can also be used to access the KCLS library system without additional passwords or sign in. For guides on use follow this link:

[Parent Portal / SORA@King County Library System \(fwps.org\)](http://www.fwps.org/parent-portal)

## Incoming 9<sup>th</sup> and 10<sup>th</sup> Grade Summer Learning

**Directions:** The following packet of learning activities is provided to help prepare you for 9<sup>th</sup> or 10<sup>th</sup> grade. Practicing these essential skills and keeping your mind engaged will help you hit the ground running upon returning to the classroom in the Fall. If you do a little each day, it will keep the concepts fresh in your mind. We look forward to seeing you back in class!

### Weekly Activity Overview

- \_\_\_\_\_ Read a book of your choice for 30 minutes every day
- \_\_\_\_\_ Complete 30 minutes of Reading/Writing from activities in the Reading/Writing Menu .....page 4
- \_\_\_\_\_ Complete 30 minutes of Mathia or Math activities every day ..... page 12
  - Appendix A Get Ready for Geometry....page 21
  - Appendix B-Get Ready for Algebra 1 and Algebra 2 .... page 29
  - Appendix C- Solving ....page 36
- \_\_\_\_\_ Do something active every day from the Activity/Health menu ..... page 16
- \_\_\_\_\_ Complete one weekly College and Career Readiness Activity ..... page 21
  - Appendix D ..... page 42
  - Appendix E ..... page 44
- \_\_\_\_\_ Complete one weekly Social Emotional Learning activity .....page 18

Here is a suggested schedule for times:


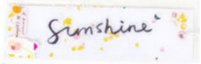






9-10 Weekly Schedule	Monday	Tuesday	Wednesday	Thursday	Friday
<b>Literacy</b>	30 min Reading/Writing	30 min Reading/Writing	30 min Reading/Writing	30 min Reading/Writing	30 min Reading/Writing
<b>Physical Activity</b>	20 min Activity Menu	20min Activity Menu	20 min Activity Menu	20 min Activity Menu	20 min Activity Menu
<b>Math</b>	30 min MATHia, Weekly Activities & Get Ready for	30 min MATHia, Weekly Activities & Get Ready for	30 min MATHia, Weekly Activities & Get Ready for	30 min MATHia, Weekly Activities & Get Ready for	30 min MATHia, Weekly Activities & Get Ready for
<b>Also Do</b>	<ul style="list-style-type: none"> <li>• Daily – 30 Minutes of Independent Reading</li> <li>• Weekly – Social-Emotional Learning Activity (choose from menu)</li> <li>• Weekly – College and Career Readiness Activity (choose from menu)</li> </ul>				

## English Language Arts - 30 min DAILY

**Directions:** Each day, practice 30 minutes - choose a reading/writing activity from the menu **and** complete the weekly task with the articles included in this packet. Online resources for reading books and articles are listed below the menu. Some articles have also been included in this packet. Keep your written responses together on notebook paper or in a reading journal. Think of the menu like BINGO and try to get a total blackout! Other ways to get BINGO are – around the square (16 boxes), inside square (9 boxes), X (9 boxes). You can repeat menu items if you have some favorites!

### Standards Addressed:

9/10 RL.1 & 9/10 RI.1 Cite evidence from text	9/10 RL.2 & 9/10 RI.1 Determine theme or central idea	9/10 RL.3 & 9/10 RI.3 story elements and idea interactions
9/10 W.1 Write arguments	9/10 W.2 Write informational text	9/10 L.4 Determine meaning of unknown words and phrases

Read a book of your choice 20 min. and create an Instagram profile for your favorite character that incorporates main aspects of their character.	Read one of the online articles and write a summary. 	Read 20 minutes out loud to your pet from a reading of your choice. Write a tweet your pet would say in response to the reading.	Read 20 minutes in your favorite reading spot. Write about how your location impacts your reading experience.	Read 20 minutes in a book of your choice. Create a bookmark with images that represent the theme of the book. 
Read an online article. Write a Claim about the article with two pieces of Evidence.	Use a recording app to record yourself reading aloud for 20 minutes. Share the video with a family member.	Read an online article. Write down 3-5 unknown vocabulary words. Predict what they mean from context clues then look them up	Read 20 min in a book of your choice and create a comic strip for the section you read today. Try using the comic creator below.	Read an online article. Write down a claim the author makes and why you support or disagree using evidence from the text.
Set up a time to meet with a friend. Each of you read 20 min. in the book of your choice ahead of time. Discuss what you read. 	Read 20 min. in a book of your choice. Create a poem about the main character. Try using the magnetic poetry link below.	Read outside for 20 minutes. When done, design a new book cover for the book you are reading. 	Read an online article. Write a summary paragraph of the article and share it with a family member.	Read a book of your choice for 20 min. Write a review either recommending or not recommending the book. Use evidence. 
Read 20 min. in the book of your choice. How would you change this part of the book to make it more dynamic? Rewrite one page with your changes.	Read an online article. Make a one-pager that details the main idea, and support it with 2-3 quotes from the text.	Pick one of the Writing in the Margin strategies to use with an online article.	Read 20 minutes in a book of your choice. Write about how the story might different if you could change the setting.	Read 20 minutes in a book of your choice. Create a collage of items the main character would love.
Read an online article out loud to a family member. Discuss if you agree with the author or not and why. 	Read 20 min. in the book of your choice. If your main character was a super hero/villain who would they be? Write your response.	Read an online article. What is one cause/effect relationship you notice? 	Read an online article. Write down the central idea and 2 supporting details and two counter arguments.	Read 20 min. in the book of your choice. Write a short script, changing the dialogue between two characters. 

**Helpful ELA Sites** – If you have technology available, the following websites provide online books and reading/writing practice:  
**Reading**

King County Library Summer Reading: <https://kcls.org/summer/>

Summer reading information video: <https://w3.kcls.org/srp/KCLS%202020%20Summer%20Reading%20Program.mp4>

Scholastic Articles: <https://classroommagazines.scholastic.com/articles-for-students.html#middle-and-high-school>

**Writing:**

Magnetic Poetry: <http://play.magneticpoetry.com/poem/Original/kit/>

Create your own comic: <https://www.makebeliefscomix.com/>

High school prompts: <https://www.journalbuddies.com/writing-worksheets-printables/high-school/>

**Attached Articles and AVID Support**

**Writing in the Margins: 6 Strategies at a Glance**

<p><b>Visualize</b></p> <p>Visualize what the author is saying and draw an illustration in the margin. Visualizing what authors say will help you clarify complex concepts and ideas.</p> <p>When visualizing, ask:</p> <ul style="list-style-type: none"> <li>• What does this look like?</li> <li>• How can I draw this concept/idea?</li> <li>• What visual and/or symbol best represents this idea?</li> </ul>	<p><b>Summarize</b></p> <p>Briefly summarize paragraphs or sections of a text. Summarizing is a good way to keep track of essential information while gaining control of lengthier passages.</p> <p>Summaries will:</p> <ul style="list-style-type: none"> <li>• state what the paragraph is about</li> <li>• describe what the author is doing</li> <li>• account for key terms and/or ideas</li> </ul>
<p><b>Clarify</b></p> <p>Clarify complex ideas presented in the text. Readers clarify ideas through a process of analysis, synthesis, and evaluation. Pausing to clarify ideas will increase your understanding of the ideas in the text.</p> <p>In order to clarify information, you might:</p> <ul style="list-style-type: none"> <li>• define key terms</li> <li>• reread sections of the text</li> <li>• analyze or connect ideas in the text</li> <li>• paraphrase or summarize ideas</li> </ul>	<p><b>Connect</b></p> <p>Make connections within the reading to your own life and to the world. Making connections will improve your comprehension of the text.</p> <p>While reading, you might ask:</p> <ul style="list-style-type: none"> <li>• How does this relate to me?</li> <li>• How does this idea relate to other ideas in the text?</li> <li>• How does this relate to the world?</li> </ul>
<p><b>Respond</b></p> <p>Respond to ideas in the text as you read. Your responses can be personal or analytical in nature. Thoughtful responses will increase engagement and comprehension.</p> <p>Readers will often respond to:</p> <ul style="list-style-type: none"> <li>• interesting ideas</li> <li>• emotional arguments</li> <li>• provocative statements</li> <li>• author's claims</li> </ul>	<p><b>Question</b></p> <p>Question both the ideas in the text and your own understanding of the text. Asking good questions while reading will help you become a more critical reader.</p> <p>While reading, you might ask:</p> <ul style="list-style-type: none"> <li>• What is the author saying here?</li> <li>• What is the author doing?</li> <li>• What do I understand so far?</li> <li>• What is the purpose of this section?</li> </ul>

- facts, data, and other support

- What do I agree/disagree with?

**Writing with Evidence-** Closely read one article each week and follow the directions to practice gathering evidence from your reading. In the 4<sup>th</sup> week, you will use this evidence to write an essay.

**Week 1: Working Financial Literacy in with the 3 R's**

<https://www.nytimes.com/2010/04/10/your-money/10money.html>

**Directions:** Choose one of the writing in the margins strategies from page 3 and use it as you read this article. When you have finished reading and annotating, answer the following prompt: *Why does financial literacy matter? Use at least 3 pieces of evidence.*



Most Americans aren't fluent in the language of money. Yet we're expected to make big financial decisions as early as our teens—Should I take on thousands of dollars of student debt? Should I buy a car?—even though most of us received no formal instruction on financial matters until it was too late.

While no course in personal finance could have prevented many Americans from getting caught up in the housing bubble<sup>1</sup>, it's clear that most of us need some help, preferably starting when we're still in school. And I'm not just talking about learning to balance your checkbook. It's understanding concepts like the time value of money, risk and reward, and, yes, the importance of savings.

All of this raises the question: What's happening inside our classrooms? And how many schools even broach the topic? As it turns out, for a country that prizes personal responsibility, we're doing very little.

"We need to teach the basics of economics and finances so people can make financial decisions in a changing world," said Annamaria Lusardi, economics professor at Dartmouth College and a research associate at the National Bureau of Economic Research. "It's the compounding of interest, the problem of inflation. These are the principles. And these are really scientific topics."

While more states are beginning to require some sort of personal finance instruction, there aren't enough that do, financial literacy experts say, and there is little consistency in the quality of the education. Just 13 states require students to take a personal finance course or include the subject in an economics course before they graduate from high school, up from seven states in 2007, according to the Council for Economic Education. Meanwhile, 34 states (including those 13) have personal finance within their curriculum guidelines, up from 28 states in 2007. . . .

But that hasn't stopped enterprising teachers like Mathew Frost, who teaches 11th and 12th graders American history and economics at Sunset High School in Dallas, from working the topic into his student's school day. The Texas economics curriculum carves out time for personal finance, but it doesn't test students on the material. Mr. Frost says it's just too important to ignore. So he tries to bring the lesson to life for his students by pairing them up as married couples and giving them a couple of children. The students must then create a budget based on the average income range for their neighborhood, or about \$21,000 to \$40,000 a year. As in the board game "Life," the students are dealt real-world circumstances. Mr. Frost has them randomly pick "chance cards" from a bag, which might tell them they need new brakes for their car, broke an arm, suffered a death in the family, or found \$20.

"I try to make it as realistic as possible," he said. "We talk about building budgets, expenses, investing money," he added, as well as "how to use credit wisely, insurance and careers."

One student said, "I first learned that real life isn't going to be as nice as this game,". "I also learned that good budgeting has to be maintained throughout a person's life no matter the income, no matter the living conditions."

Research shows that this type of financial education tends to resonate with the students later. Michael S. Gutter, an assistant professor of family financial management at the University of Florida, studied the issue in 2009, after he surveyed 15,700 students at 15 universities who came from states with different (or nonexistent) personal finance schooling requirements. The study was financed by the National Endowment for Financial Education, a nonprofit organization in Denver that provides financial education curriculums.

College students who came from states where there was a course required were more likely to budget, were more likely to be saving, and were less likely to have maxed out their credit cards in the last year and were more likely to be paying off their credit cards fully," Professor Gutter said. But his research also suggested that "social learning is also very powerful as well," he said. "What your parents tell you matters." . . .

He said the Department of Education's next step is to work with districts and teachers and help them find the money they need, whether it's through the many literacy-minded nonprofits or the private sector. Mr. Yale also said that department officials were working on competitive grant programs, which would allow schools to compete for money to pay for the financial literacy programs. As a joint effort with the Treasury Department, the Education Department is currently running the National Financial Capability Challenge, an online exam for high school students that measures financial know-how and recognizes outstanding performers, to help raise awareness.

## **Week 2: Finance Course Prompts Debate**

<https://www.baltimoresun.com/news/bs-xpm-2006-10-15-0610140104-story.html>

**Directions:** Choose one of the writing in the margins strategies from page 3 and use it as you read this article. When you have finished reading and annotating, answer the following prompt: *Is it a good idea for schools to require financial literacy courses? Use at least 3 pieces of evidence.*



While Carroll County students will be required to take a financial literacy course to graduate starting next year, concerns linger over whether mandating the course is the most effective way to teach money matters to teens.

"The course is likely a good thing, but I am convinced it is not the best thing," school board President Thomas G. Hiltz said last week. "One course is not a panacea and, alone, will not make our students financially literate."

After a lengthy debate about requiring the class, board members voted 4–1 to require students beginning next school year to take the half-credit course. It will cover concepts such as money management, consumer rights and responsibilities, credit, savings, and investing.

Carroll joins a handful of Maryland school systems—including Harford, St. Mary's, Talbot and Baltimore counties—with a similar requirement. The financial course was one of several changes to the high school program of studies that the board approved.

During last week's meeting, Hiltz joined Cynthia L. Foley in supporting a motion to amend the proposal that would have eliminated financial literacy as a required course. The motion to amend failed in a 3–2 vote.

Foley was the lone dissenter<sup>1</sup> when the original proposal came to a vote. Hiltz said he voted to approve the high school program of studies that included the financial literacy requirement because he supported the overall plan.

"While it did not turn out the way I may have wanted . . . unless I believe there has been an egregious mistake in judgment, a vote against the entire high school program of studies is, in my view, sour grapes," Hiltz said in an email.

During the meeting, Hiltz suggested the board needed more time to consider alternatives, such as incorporating elements of the course into already required classes or developing a comprehensive "financial literacy program," not a single course.

Hiltz also said a required course would necessitate about 10 teachers each year and cost the system about \$600,000 annually. "My overwhelming concern is not cost—it is effectiveness," Hiltz said. "The \$600,000 is a low cost if the course is effective. An effective course will return that investment. It is a high cost if it is ineffective."

School officials said statistics suggest teens and young adults are assuming too much credit card debt and are not knowledgeable about finances.

About one in five students gets a personal finance course during high school, according to the JumpStart Coalition for Personal Financial Literacy, which surveys high school seniors every other year to gauge financial aptitude.

Of the 5,775 high school seniors in 37 states who participated in that survey this year, students on average scored 52.4 percent on 30 questions, according to the group.

A 2004 poll of college administrators found that excessive credit card debt was the primary reason students dropped out and the secondary reason was low grades, according to the Maryland Coalition for Financial Literacy.

Carroll school officials said last week that in a "pre-test" given to about 30 students taking the financial literacy elective this semester, the highest score was about 60 percent—with some students scoring much lower.

"Personal finances are not being taught in the home," said Patricia Hummel, a parent who also teaches financial literacy at Winters Mill High as a permanent substitute. "Studies have shown that only 26 percent of 13- to 21-year-olds reported that their parents actively taught them how to manage money."

Hummel supported a required financial literacy course because, "unless this class is mandated, students will not take advantage of the class."

Hiltz said that while the district has piloted [tested] a financial literacy course, no local data has been collected on its effectiveness.

"We all agree that financial literacy is essential," he said. "The lack of a real consideration of other options . . . troubled me greatly. I am concerned that we picked low-hanging fruit, which may be the most expensive and least effective option."

1dissenter: someone who disagrees with a particular view

### **Week 3: PRO/CON: Should all high school take courses in personal finance?**

*By K. Alexander Ashe and Wayne Madsen, Tribune News Service, adapted by Newsela staff on 06.13.17*

**Directions:** Choose one of the writing in the margins strategies from page 3 and use it as you read this article. When you have finished reading and annotating, answer the following prompt: *Should schools emphasize financial literacy? Use at least 3 pieces of evidence.*



### **PRO: Yes. Education system overhaul should include new emphasis on financial literacy**

As Secretary of Education Betsy DeVos sets out to reform America's underperforming public schools, let's hope she makes their shocking lack of personal finance instruction a top priority. Our nation's high schools are flunking badly when it comes to teaching their students the key elements of financial literacy.

A 2016 study by the Council for Economic Education found that only 17 states require high school students to take courses in personal finance.

#### **Teach Kids The Basics In Money Management**

That's particularly distressing when you consider that the final year of high school is, for many young people, a last opportunity to acquire financial literacy. Soon they will enter today's costly, complex and rapidly changing world.

Personal finance courses don't require teachers with advanced degrees. Almost any teacher who can balance a checkbook can follow some already successful course guidelines to impart financial basics to graduating seniors.

To be successful, most kids don't need to learn about advanced ideas like collateralized debt instruments, said Nan J. Morrison. She is president and CEO of the Council for Economic Education. Still, kids need to understand the basics, she says. "They do need to know how to open a bank account, how much they need to save each month to reach their goals and, if they borrow this amount of money, how much money they will need to earn to pay it back."

#### **"Everyday Economics"**

Morrison and other personal finance advocates are responsible for many of the recent gains made in the establishment of what some call "everyday economics" in high school classrooms. In 1998, only 14 states required that high schools give their seniors a basic knowledge of personal finance. Now 37 states do, meaning more students are receiving finance lessons in their civics and math classes.

And over the last few years, more populated states like New York and Illinois have toughened standards. Washington state has new legislation doing the same.

So more states are implementing personal finance standards. But the number of states that require high school students to take an actual course in personal finance — 17 — has remained unchanged since 2014, according to the study.

That's truly unfortunate. The states with the toughest personal finance requirements send their students on to college and into the real world with a measurable head start.

#### **Benefits Students In The Real World**

Data recently released by the Investor Education Foundation, or IEF, show that high school students benefit from the classes. Those who passed required personal finance courses have better-than-average credit scores and are less likely to be in debt as young adults. The IEF study found "notable improvements" in credit outcomes for young adults ages 18 to 22 in Idaho, Georgia, and Texas, three states where financial education mandates are considered strict by the Council for Economic Education.

Personal finance courses provide an important leg-up to students in low-income areas with lagging schools.

Young people in economically challenged areas are often unemployed or underemployed. They find themselves at the mercy of loan sharks and payday loans who take advantage of people who need to borrow money quickly. These lenders target poor people with unethical and even illegal practices, charging very high interest rates. These factors can be key drivers of ongoing poverty.

Recent graduates in these communities find themselves struggling to pay bills and manage what little money they have.

As Morrison said, "Exposure is everything. When you learn good habits, you tend to have better outcomes."

### **## CON: No. Better we get back to basics**

Today, basic classroom subjects like writing, reading, mathematics, science and history are being discarded or underfunded by state public education authorities. Making tougher requirements on the teaching of personal finance would be a waste of time and money. Politicians and school board members pushing such an agenda should be required to take and pass courses in public finance before making such demands.

All 50 states plus the District of Columbia already require, as part of their standard kindergartento-high-school curriculums, the teaching of basic economics. Forty-five require that personal finance be taught in their basic economics courses.

That's sufficient when you consider the education basics getting little attention.

#### **Students Lagging In Education Basics**

Students who finish high school without a baseline education in science, math, English comprehension and at least one foreign language wind up competing for low-wage jobs that don't require special skills.



In science, as measured by the Programme for International Student Assessment, U.S. students now rank behind those of Vietnam, Slovenia, Portugal, South Korea and 19 other nations.

In reading skills, American students rank 24th, behind Ireland, Estonia, Macao and France.

America's report card in math is awful, as it is 39th, behind Russia, Spain, Poland and Macao.

With these results, the United States cannot hope to compete in a globalized world. Jobs demand a workforce with expertise in engineering, medical research, computer science, robotics and environmental technology.

In the same ranking, Singapore topped all others in all three categories. Hong Kong came in second in math and reading, while Japan took second place, barely ahead of Estonia, in science.

With this in mind, Americans and their elected representatives have only themselves to blame when Singaporean, Japanese and Estonian workers are favored for employment over people from the United States.

### **Low Percentage in Math and Science**

In 2015, the U.S. Department of Education found that only 25 percent of 12th-graders were either accomplished or advanced in math.

The same study found that a mere 22 percent of high school seniors were either accomplished or advanced in science.

The only nation in history to land 12 astronauts on the moon would be hard-pressed to repeat that amazing feat today with the failure of its education system.

And besides the need for our schools to refocus on the fundamentals, there's another big problem with states requiring courses in personal finance.

There is the possibility that teachers and school administrators, already stretched thin, would be lured into allowing outsiders in the classroom to provide finance instruction.

### **Watch Out For Outside Influences In The Classroom**

What pushers of quickie college loans or high-interest credit cards would not jump at the chance to prey upon high school seniors?

These students are about to enter college or the job market.

Educational leaders should be insulating their students from such ilk, not opening their school doors to them.

America would not be the great nation it is today without its history of quality public education. Abigail Adams, the second first lady of the United States, lived in a time when women were denied equality in employment and foresaw what was required of the young country: "Learning is not attained by chance; it must be sought for with ardor and attended to with diligence."

### **Week 4: Writing an Essay- Use the evidence you've gathered in the 3 articles above to write to the following prompt: **Should Financial Literacy classes be a High School graduation requirement?****

Spend time writing each day as you follow the writing process below.

#### ***Prewriting***

First, you will complete a prewrite. Review the graphic organizer for the structure of a multi paragraph essay. Review through your notes from the readings. What is the main idea or claim you want to make? What is the evidence you will use to support it? How will you explain how the evidence supports? You don't have to write full sentences at this stage of the writing process. Just brainstorm ideas.

Use any type of graphic organizer that works for you. Review the structure of a 5 paragraph essay below.

#### ***Drafting***

Next, you will complete your first draft of your essay. Remember, this is a first draft. Don't worry about spelling or grammar just get your ideas down in an organized way. Write the body of your draft based on your prewrite with topic sentences for each of your supporting ideas followed by evidence and reasoning. Follow the structure from the 5 Paragraph Essay organizer to create your own graphic organizer. Make sure you include evidence (quotes) from each of the articles. Cite your quotes with the title of the article. Use transitions between your paragraphs. When you are finished your draft should include an introduction, body paragraphs and a conclusion.

#### ***Revising, Editing and Publishing***

Once your draft is done, you will revise, edit and publish. Revising is the process of changing and improving your first draft. It's your opportunity to think about what you've written and then add, cut, or change it as needed. Add more details to your first draft. Add clear words, specific vocabulary and more description. Your goal is to make all of your ideas clear, detailed and complete. Use the checklists below to help you revise.

Then you will edit and publish your essay. Editing is checking your revised writing line by line for errors. Also proofread for errors in spelling and punctuation. When you are sure all of your writing is correct. Create your final draft of your writing. Use your very best handwriting or you may type and print your writing using a computer. Read your final essay to a family member.

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## WRITING STRUCTURE: 5 PARAGRAPH ESSAY

### INTRODUCTION (3–4 sentences)

- **HOOK/LEAD** (*Attention grabber, quote, statistic, fact, bold statement*) 1 sentence
- **BACKGROUND INFORMATION** (*Historical context/Why is this topic important?*) 1–2 sentences
- **THESIS/MAIN IDEA** (*Main idea = topic + opinion+ reasons*) 1 sentence

### BODY PARAGRAPH 1 (2–3 paragraphs total in body)

- **TRANSITION + TOPIC SENTENCE** (*This is the first reason that supports your thesis/main claim*)
  - » **Evidence** (*Concrete details, quotes, facts, textual evidence*)
  - » **Reasoning** (*Elaboration, commentary*)
  - » **Evidence** (*Concrete details, quotes, facts, textual evidence*)
  - » **Reasoning** (*Elaboration, commentary*)
- **CONCLUDING SENTENCE** (*Wrap up this paragraph*)

Include 2–3+  
pieces of  
reasoning and  
evidence.

### BODY PARAGRAPH 2

- **TRANSITION + TOPIC SENTENCE** (*This is the second reason that supports your thesis/main claim*)
  - » **Evidence** (*Concrete details, quotes, facts, textual evidence*)
  - » **Reasoning** (*Elaboration, commentary*)
  - » **Evidence** (*Concrete details, quotes, facts, textual evidence*)
  - » **Reasoning** (*Elaboration, commentary*)
- **CONCLUDING SENTENCE** (*Wrap up this paragraph*)

Include 2–3+  
pieces of  
reasoning and  
evidence.

### BODY PARAGRAPH 3

- **TRANSITION + TOPIC SENTENCE** (*This is the third reason that supports your thesis/main claim*)
  - » **Evidence** (*Concrete details, quotes, facts, textual evidence*)
  - » **Reasoning** (*Elaboration, commentary*)
  - » **Evidence** (*Concrete details, quotes, facts, textual evidence*)
  - » **Reasoning** (*Elaboration, commentary*)
- **CONCLUDING SENTENCE**

Include 2–3+  
pieces of  
reasoning and  
evidence.

*NOTE: Beginning in 7th grade, Argumentative writing needs to include counter claim and refutation within the body paragraphs.*

### CONCLUSION (3–4 sentences)

- **RESTATE THESIS** (*Remind the reader of your thesis or main claim*) 1 sentence
- **SUMMARIZE MAIN POINTS** (*Review each of your main reasons*)
- **FINAL THOUGHT** or **CALL TO ACTION**

1.	Is the overall <b>claim</b> clearly stated in the introduction?	YES	NO
2.	Does the introduction hook the reader and give brief background on the topic?	YES	NO
3.	Does each body paragraph begin with a supporting topic sentence that supports the overall claim?	YES	NO
4.	Does each body paragraph include <b>evidence/ quotes</b> to support their reason?	YES	NO
5.	Does each body paragraph include <b>reasoning</b> that explains how the evidence supports the main topic for that paragraph?	YES	NO
6.	Does the conclusion restate the main points of the essay in a new way?	YES	NO
7.	Does the writer use academic vocabulary and persuasive words and language?	YES	NO
8.	<i>Are there parts of the essay that are unclear? If you answered yes, then underline the passage and put a question mark next to the sentence</i>	YES	NO

CONVENTIONS	CHECK FOR THE FOLLOWING	
<b>Capitalization</b>	The beginning of each sentence is capitalized.	
	Proper nouns are capitalized	
<b>Punctuation</b>	Periods are at the end of each complete sentence	
	Commas are used when needed	
	Apostrophes are used when needed	
<b>Quotation Marks</b>	Quotation marks are placed at the beginning and at the end of the quotation.	
<b>Spelling</b>	All words are spelled correctly.	
<b>Dead words are not used</b>	words such as: stuff, big, alot, like, etc.	

## Math – 30 minutes DAILY

### **Math 9-10**

**MATHia:** Log in through Launchpad – Click Math Folder and then click the Carnegie Learning (CL) tile.

Then click MATHia to continue to work through the workspaces for the class you were enrolled in or for Math 8 students start the with the Launch workspace and then the Getting Ready for workspaces.

### **Learning Activities Get Ready for Geometry, Get Ready for Algebra 2 and Bridge to College, and Solving**

#### **Appendix A: Get Ready for Geometry**

- Week 1: Transformation
- Week 2: Angles
- Week 3: Triangles
- Week 4: Solving (Appendix C)

#### **Appendix B: Get Ready for Algebra 1 and Algebra 2**

- Week 1: Number and Quantity
- Week 2: Functions
- Week 3: Linear
- Week 4: Solving (Appendix C)

#### **Appendix C: Solving**

#### **AP Resources:**

Enrolled in an AP Course? Join AP Classroom

Sign and Practice in AP Classroom <https://myap.collegeboard.org/login>












Can't access AP Classroom?

Visit <https://apcentral.collegeboard.org/courses>

#### **IB Resources:**

IB Math resource for Mathematics Analysis and Approaches and Applications and Interpretation: <https://www.revisionvillage.com/free-ib-maths-resources/>

## Physical Activity & Health Menu: 20 minutes – DAILY

Fueling Your Body Right	<u>Tabata</u> <u>Fit-Fitness</u>	Wellness These activities can be completed each day.	Try Something New	Fun Fitness																		
<p><b>Cooking:</b> HELP PLAN A MENU FOR YOUR FAMILY FOR A WEEK.</p> 	<p>20 seconds of work, 10 seconds of rest 8 rounds per exercise.</p> <ul style="list-style-type: none"><li>• Bicycle Crunches</li><li>• Jumping Jacks</li><li>• Forearm Plank</li><li>• High Knees</li></ul> 	<p><u>Savasana:</u> Yoga is a great way to relieve stress. Try Savasana, considered to be the hardest yoga pose! Fully relax &amp; clear your mind.</p> 	<p><b>Dice Fitness:</b> 2 dice, set time for 20 minutes. Roll both die. Complete the exercises for each die.</p> <table><tr><td>25 Crunches</td><td></td><td>10 Burpees</td></tr><tr><td>10 Squats</td><td></td><td>15 Jumping Jacks</td></tr><tr><td>10 Push-Ups</td><td></td><td>15 High Knees</td></tr><tr><td>1 min. Wall Sit</td><td></td><td>15 Mt. Climbers</td></tr><tr><td>10 Lunges</td><td></td><td>15 Frog Jumps</td></tr><tr><td>Water Break</td><td></td><td>2 min. Run</td></tr></table>	25 Crunches		10 Burpees	10 Squats		15 Jumping Jacks	10 Push-Ups		15 High Knees	1 min. Wall Sit		15 Mt. Climbers	10 Lunges		15 Frog Jumps	Water Break		2 min. Run	<p><b>Fun Walk:</b> Go for a walk outside or in your home. Try to find one thing that starts with each letter of the alphabet. Do this with your family or friends and make it a competition. You can set a time limit, whoever has the most letters wins.</p> 
25 Crunches		10 Burpees																				
10 Squats		15 Jumping Jacks																				
10 Push-Ups		15 High Knees																				
1 min. Wall Sit		15 Mt. Climbers																				
10 Lunges		15 Frog Jumps																				
Water Break		2 min. Run																				
<p><b>Water:</b> Did you know you should drink at least half of your body weight (in ounces) of water per day? Calculate how many ounces you should drink daily, then keep track to make sure you are hydrated.</p> 	<p>20 seconds of work, 10 seconds of rest 8 rounds per exercise</p> <ul style="list-style-type: none"><li>• Squats</li><li>• Russian Twists</li><li>• Straight Arm Plank</li><li>• Jump Rope (with or without a rope)</li></ul> 	<p><u>Square Breath Practice:</u> Inhale for 4 counts, hold for 4 counts, exhale for 4 counts, hold for 4 counts. Set a timer for 3 minutes and breathe in this manner the whole time.</p>	<p><b>Deck of Cards:</b> Using a full deck of cards, pull one card at a time and complete the exercises below for each. Face cards = 10 reps, Number cards = their # of reps. Jokers = 25 Burpees</p> <table><tr><td> Sit-Ups</td><td> Push-Ups</td></tr><tr><td> Jumping Jacks</td><td> Walking Lunge</td></tr></table>	 Sit-Ups	 Push-Ups	 Jumping Jacks	 Walking Lunge	<p><b>Obstacle Course:</b> Create an obstacle course in your yard or at a nearby park. Practice it with your family and friends and then hold a friendly competition to see who can complete it the fastest!</p> 														
 Sit-Ups	 Push-Ups																					
 Jumping Jacks	 Walking Lunge																					

**Label Lingo** – Look at the nutrition label for your favorite snack. Are the Macronutrients (carbs, fat, protein) balanced?



20 seconds of work, 10 seconds of rest 8 rounds per exercise

- Mt. Climbers
- Sit-Ups
- Alternating Reverse Lunges
- Push-Ups

Downward Dog – Hold three times for 20 seconds. Try lifting one leg for an even greater challenge!



**AMRAP** – complete as many rounds as possible in 20 min.

5 Burpees  
10 Tricep Dips (w/chair)  
15 Squat Jumps  
20 second plank  
25 – Speed Skaters















Go on a bike/scooter ride with family or friends. At each street corner hop off and do 15 jumping jacks. You can switch up the interval in which you stop. Make it fun!



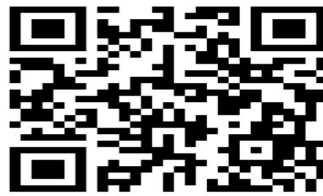


## Physical Activity & Health Menu: 20 minutes - DAILY

Fueling Your Body Right	<u>Tabata</u> <u>Fit-Fitness</u>	Wellness These activities can be completed each day.	Try Something New	Fun Fitness																				
<p><b>5 Food Groups:</b> Which of the 5 food groups do you need to eat more of? Veggies, Fruits, Grains, Dairy, Protein. Go to Myplate.org and learn what foods you need to eat more of and then eat away!</p> 	<p>20 seconds of work, 10 seconds of rest 8 rounds per exercise</p> <ul style="list-style-type: none"><li>• Burpees</li><li>• Flutter Kick</li><li>• Star Jumps</li><li>• Tricep Dips w/chair</li></ul>  <p>FLUTTER KICKS</p>	<p><b>Mindful Minute:</b> for 60 seconds, clear your mind &amp; only focus on your breathing. If you mind starts to wander, bring your attention back to your breathing.</p> 	<p><b>Flip A Coin Fitness:</b> Set the timer for 20 min. Flip a coin and do the corresponding exercise for 30 seconds. Go down the list one row at a time, repeat until time is up.</p> <table><tr><th>HEADS </th><th>TAILS </th></tr><tr><td>Jumping Jacks</td><td>High Knees</td></tr><tr><td>Pushups</td><td>Squats</td></tr><tr><td>Leg Lifts</td><td>Lunges</td></tr><tr><td>Jumping Jacks</td><td>High Knees</td></tr><tr><td>Plank</td><td>Burpees</td></tr><tr><td>Squats</td><td>Crunches</td></tr><tr><td>Jumping Jacks</td><td>High Knees</td></tr><tr><td>Lunges</td><td>Pushups</td></tr><tr><td>Burpees</td><td>Leg Lifts</td></tr></table>	HEADS 	TAILS 	Jumping Jacks	High Knees	Pushups	Squats	Leg Lifts	Lunges	Jumping Jacks	High Knees	Plank	Burpees	Squats	Crunches	Jumping Jacks	High Knees	Lunges	Pushups	Burpees	Leg Lifts	<p><b>Dance Party:</b> Turn on your favorite song and dance like nobody is watching! OR go to <a href="#">Youtube and search Just Dance</a>. Dance to 3 of your favorite songs!</p> 
HEADS 	TAILS 																							
Jumping Jacks	High Knees																							
Pushups	Squats																							
Leg Lifts	Lunges																							
Jumping Jacks	High Knees																							
Plank	Burpees																							
Squats	Crunches																							
Jumping Jacks	High Knees																							
Lunges	Pushups																							
Burpees	Leg Lifts																							
<p><b>Cooking:</b> Prepare and serve a meal for your family.</p> 	<p>20 seconds of work, 10 seconds of rest 8 rounds per exercise</p> <p>Create your own Tabata workout and do it with your family.</p>	<p><b>Meditation:</b> Try this “body scan meditation” on youtube. <a href="https://www.youtube.com/watch?v=T0nuKBVQS7M">https://www.youtube.com/watch?v=T0nuKBVQS7M</a></p> <p>Or search to find your own.</p>	<p><b>Walk/Run Fitness</b> – Warm-up by walking for 5 minutes. Then for 20 min. Run 1 minute, walk one minute. Walk for 5 minutes to cool down. You can vary the amount of walking and running depending on your fitness level.</p> 	<p><b>Family Olympics Challenge-</b> Create a 3-6 event Olympics Challenge that your family and friends can participate in. Search Youtube and google for ideas for activities, scorecards and simple prizes.</p>																				

## FWPS SEL SUMMER CHALLENGE

Scan the QR code OR type in the link below to learn more about the Summer SEL Challenge . All participants will be entered into a raffle!



<https://qr-codes.io/opRC36>

## Social Emotional Learning

Use a Mindfulness Exercise whenever you wish & choose up to ONE Activity Each Week

### Mindfulness Exercises

Defined: Being mindful is taking notice of how your body feels and what you see, smell and taste. Improved focus can help you achieve higher levels in sports, school or music. When you notice what is happening around you, it can help you calm down when you're sad, angry or frustrated.

Mindfulness is a skill that helps us stay calm and in control. Look around your room to find 5 things you can see, 4 things you can touch, 3 things you can hear, 2 things you can smell, and 1 thing you can taste. This is a grounding exercise that can help manage tough emotions and provide a mental reset when needed. After giving it a try, you can move to another room and try the same.

Utilize the Mindfulness Exercise examples	Utilize the Mindfulness Exercise examples in another setting	Support a friend/family member in going through the Mindfulness Exercise examples
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Square Breathing Activity	Five Things
<ol style="list-style-type: none"> <li>1. Breath in through your nose for four counts</li> <li>2. Pause/Hold your breath for four counts</li> <li>3. Exhale through your mouth for four counts</li> <li>4. Pause/Hold your breath for four counts</li> </ol>	In silence for 3 minutes observe the world around you and notice things you normally overlook. This will help the brain sort through distracting or stressful thoughts. In silence, notice five things you see, feel, or hear. Explain the benefits of just noticing the world around us and that they can use this mindfulness activity when they start to feel overwhelmed or anxious.
Anchor Breathing	Name it to Tame it
Anchor breathing is the practice of using your breath to help focus your mind on one point. Place your hand on your belly, on your chest, or in front of your nose. The placement of your hand and the sensation of breath is your anchor spot. The anchor spot is where you put your attention. As you breathe in, keep your attention on your anchor spot; as you breathe out, keep your attention on your anchor spot and repeat for 2 minutes.	While sitting and relaxing, have students relax while focusing on their deep breathing. The act of naming your worries engages your "thinking brain," which tames and calms down your "teaching brain."

### Social Engagement

Do you have at least 2 or more social media accounts? How about 4 or more? What do you enjoy about using social media? How does social media represent you and your values? What can make a social media experience negative? Do you think it's easier for people to be mean to each other online than it is in person? (Expand on topics you find of interest)

Process the questions about social media by yourself	Process the questions about social media by with a thought partner	Support a friend/family in processing the questions or perceptions about social media by yourself
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### Growth Mindset/Resiliency

Think about a time in your life where someone rejected you or you missed out on something important or when a big plan collapsed. These would be points in your life where a door closed. Now think about what happened after: what doors opened after? What would have never happened if the first door didn't close? Write down these experiences in the spaces below (write as many experiences as possible that come to mind).

- |  |   |   |
|--|---|---|
| <ul style="list-style-type: none"> <li>▪ What led to the door closing? What helped you open the new door?</li> <li>▪ How long did it take you to realize that a new door was open?</li> <li>▪ Was it easy or hard for you to realize that a new door was open?</li> <li>▪ What prevented you from seeing the new open door?</li> </ul> | <ul style="list-style-type: none"> <li>▪ What can you do next time to recognize the new opportunity sooner?</li> <li>▪ What were the effects of the door closing on you? Did it last long?</li> <li>▪ Did the experience bring anything positive?</li> <li>▪ Which character strengths did you use in this exercise?</li> </ul> | <ul style="list-style-type: none"> <li>▪ What does a closed door represent to you now?</li> <li>▪ What did you learn from the door closing?</li> <li>▪ Is there more room for growth from these types of experiences?</li> <li>▪ Is there a closed door that you still wish to see open?</li> </ul> |
|--|---|---|

Process the Growth  
Mindset/Resiliency tool Alone

Process the Growth  
Mindset/Resiliency tool with a  
thought partner


Support a friend/family member with  
going through the Growth  
Mindset/Resiliency tool

## Empathy & Respect

Spend some time watching a show or movie. At any given time, pause and discuss how the characters are feeling. You might ask: "How are they feeling?" and "How would you feel if that happened to you?" Use this conversation to build on considering how others feel, discussing social cues, and caring about their emotions.

Process the Empathy & respect tool Alone with a show you are currently in to.	Process the Empathy & respect tool Alone with a show you (or both of you) are currently in to with a thought partner	Support a friend/family member with the Empathy & respect tool with a show they are watching
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## Personal Identity Chart



"Who am I?" Take some time to think about yourself, your role in your family, culture, ethnicity, hobbies, and background. Some aspects of our identities are consistent over our lives, others change as we gain skills and have different roles in life. Some aspects are very important to us, and some are not. Parts of our identity are seen by others, but not necessarily seen by us. Take some time to dive into your Personal Identity Chart.

Create a Personal Identity Chart for yourself	Create a Personal Identity Chart with a thought partner	Support a friend/family member in creating a Personal Identity Chart
---	---	--

## So, what is next?

### Returning to school in the Fall

Create with words or visuals on a separate piece of paper

Personal or Academic Goal(s) for the year	What strategies will you use to positive in challenging times?	What are you proud about yourself?  Where can you continue to grow as a person?
Who is an adult when school starts again that you feel connected with?  Who is a peer/other student you can check-in with?	What kind of differences do you foresee in the next school year? (i.e. Social Distancing, Wearing masks, Washing Hands)	

## College and Career: Choose ONE Activity Each Week

### MaiaLearning

Scholars complete their High School and Beyond Plan through our online college and career exploration program, MaiaLearning. A scholar will log in by going to <https://www.maialearning.com/#/> and clicking Sign In in the top right corner.

After clicking Sign In, they will select the option "Sign In with Google" (the red button at the bottom of the page). The email is their StudentID#@p12fwps.org and their school password.

If you need additional help please view the FWPS MaiaLearning Walk Through using the following link:  
<https://vimeo.com/365087703>

- [9<sup>th</sup> Grade HSBP](#)
- [10<sup>th</sup> Grade HSBP](#)

If you have questions or need support please contact the Department of College Career Readiness at [ccr@fwps.org](mailto:ccr@fwps.org)

**Appendix C:** High School and Beyond Plan 9<sup>th</sup> Grade

**Appendix D:** High School and Beyond Plan 10<sup>th</sup> Grade

## Social Emotional Learning: Choose ONE Activity Each Week

**Directions:** Choose one social emotional learning activity each week.

### Coping Skills/Mindfulness

Defined: Mindful is taking notice of how your body feels and what you see, smell and taste. Improved focus can help you achieve higher levels in sports, school or music. When you notice what is happening around you, it can help you calm down when you're sad, angry or frustrated.

Mindfulness is a skill that helps us stay calm and in control. Look around your room to find 5 things you can see, 4 things you can touch, 3 things you can hear, 2 things you can smell, and 1 thing you can taste. This is a grounding exercise that can help manage tough emotions and provide a mental reset when needed. After giving it a try, you can move to another room and try the same.

Utilize the Mindfulness Tool	Utilize the Mindfulness Tool in another setting	Support a friend/family member in going through the mindfulness exercise
------------------------------	---	--

### Social Engagement

Do you have at least 2 or more social media accounts? How about 4 or more? What do you enjoy about using social media? How does social media represent you and your values? What can make a social media experience negative? Do you think it's easier for people to be mean to each other online than it is in person? (Expand on topics you find of interest)

Process the questions about social media by yourself	Process the questions about social media by with a thought partner	Support a friend/family in processing the questions or perceptions about social media by yourself
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|--|---|---|
| <ul style="list-style-type: none"> <li>• What led to the door closing? What helped you open the new door?</li> <li>• How long did it take you to realize that a new door was open?</li> <li>• Was it easy or hard for you to realize that a new door was open?</li> <li>• What prevented you from seeing the new open door?</li> </ul> | <ul style="list-style-type: none"> <li>• What can you do next time to recognize the new opportunity sooner?</li> <li>• What were the effects of the door closing on you? Did it last long?</li> <li>• Did the experience bring anything positive?</li> <li>• Which character strengths did you use in this exercise?</li> </ul> | <ul style="list-style-type: none"> <li>• What does a closed door represent to you now?</li> <li>• What did you learn from the door closing?</li> <li>• Is there more room for growth from these types of experiences?</li> <li>• Is there a closed door that you still wish to open?</li> </ul> |
|--|---|---|

Process the Growth Mindset/Resiliency tool Alone	Process the Growth Mindset/Resiliency tool with a thought partner	Support a friend/family member with going through the Growth Mindset/Resiliency tool
--	---	--

### Empathy & Respect

Spend some time watching a show or movie. At any given time, pause and discuss how the characters are feeling. You might ask: "How are they feeling?" and "How would you feel if that happened to you?" Use this conversation to build on considering how others feel, discussing social cues, and caring about their emotions.



Process the Empathy & respect tool Alone with a show you are currently in to.

Process the Empathy & respect tool Alone with a show you (or both of you) are currently in to with a thought partner

Support a friend/family member with the Empathy & respect tool with a show they are watching

### Personal Identity Chart

"Who am I?" Take some time to think about yourself, your role in your family, culture, ethnicity, hobbies, and background. Some aspects of our identities are consistent over our lives, others change as we gain skills and have different roles in life. Some aspects are very important to us, and some are not. Parts of our identity are seen by others, but not necessarily seen by us. Take some time to dive into your Personal Identity Chart.



Create a Personal Identity Chart for yourself

Create a Personal Identity Chart with a thought partner

Support a friend/family member in creating a Personal Identity Chart

### Returning to school in the Fall

Create with words or visuals on a separate piece of paper

So, what is next?

Personal or Academic Goal(s) for the year	What strategies will you use to stay positive in challenging times?	What are you proud about yourself? How can you continue to grow as a person?
Who is an adult when school starts again that you feel connected with?  Who is a peer/other student you can check-in with?	What kind of differences do you foresee in the next school year? (i.e. Social Distancing, Wearing masks, Washing Hands)	

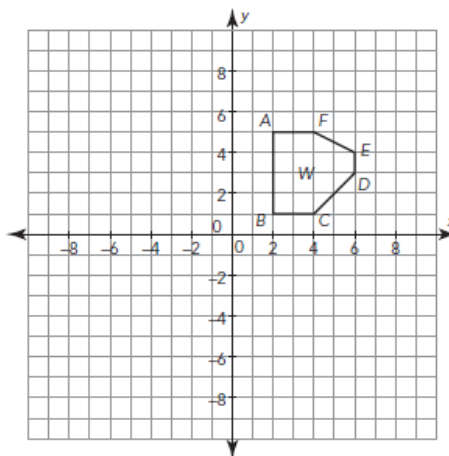
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**Appendix A: Get Ready for Geometry** Use other paper for work if you need more space

**Activity 1: Transformation**

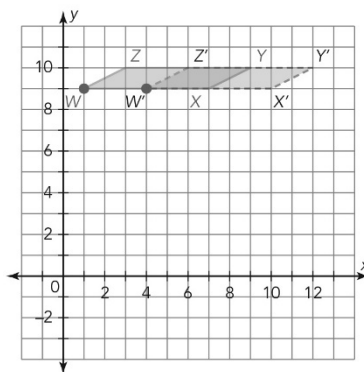
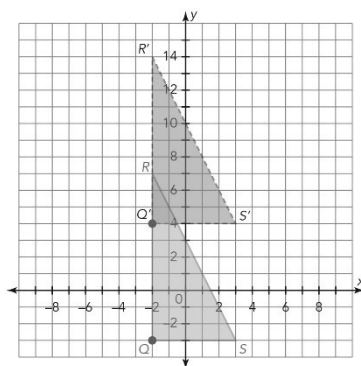
You know that translations are transformations that “slide” each point of a figure the same distance and the same direction. Each point moves in a line. You can describe translations more precisely by using coordinates. A translation is a rigid motion transformation that “slides” each point of a figure the same distance and direction.

1. Translate the figure down 6 units.
2. Did translating Figure W vertically change the size or shape of the figure?
3. Complete the table with the coordinates of Figure W'.
4. How are the values of the coordinates the same? How are they different?



Coordinates of W	Coordinates of W'
A (2, 5)	
B (2, 1)	
C (4, 1)	
D (6, 3)	
E (6, 4)	
F (4, 5)	

5. Translate the figure left 5 units.
6. Did translating Figure W horizontally change the size or shape of the figure?
7. Complete the table with the coordinates of Figure W'.
8. How are the values of the coordinates the same? How are they different?
9. Describe the translation need to match each pre-image to each congruent image.



Coordinates of W	Coordinates of W'
A (2, 5)	
B (2, 1)	
C (4, 1)	
D (6, 3)	
E (6, 4)	
F (4, 5)	

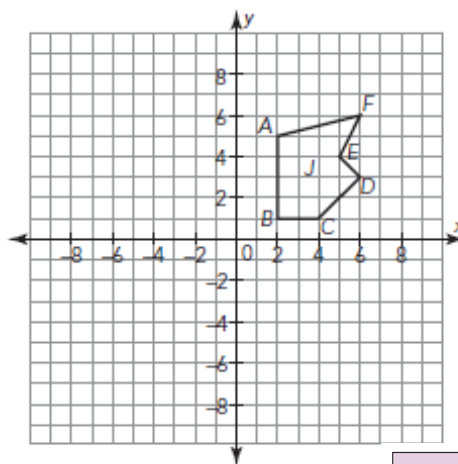
## Activity 2: Transformation

In this activity, you will reflect pre-images across the x-axis and y-axis and explore how the reflection affects the coordinates. A reflection is a rigid motion transformation that “flips” a figure across a line of reflection.

1. Reflect the Figure J across the x-axis.

Complete the table with the coordinates of the reflected figure.

Compare the coordinates of Figure J' with the coordinates of Figure J. How are the values of the coordinates the same? How are they different?



Coordinates of J	Coordinates of J' Reflected Across x-Axis
A (2, 5)	
B (2, 1)	
C (4, 1)	
D (6, 3)	
E (5, 4)	
F (6, 6)	

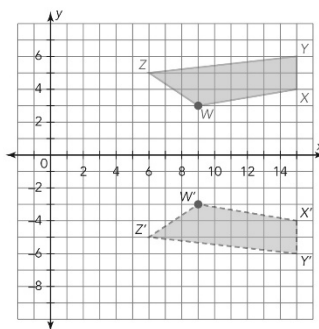
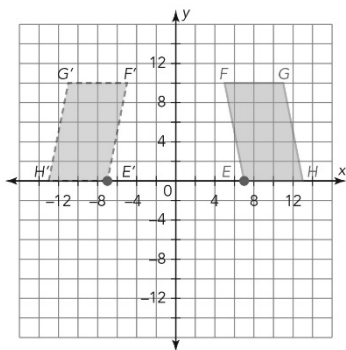
2. Reflect the Figure J across the y-axis.

Complete the table with coordinates of the reflected figure.

Compare the coordinates of Figure J'' with the coordinates of Figure J. How are the values of the coordinates the same? How are they different?

Coordinates of J	Coordinates of J'' Reflected Across y-Axis
A (2, 5)	
B (2, 1)	
C (4, 1)	
D (6, 3)	
E (5, 4)	
F (6, 6)	

3. Describe the reflection needed to map each pre-image onto each congruent image.



## Activity 3: Transformation

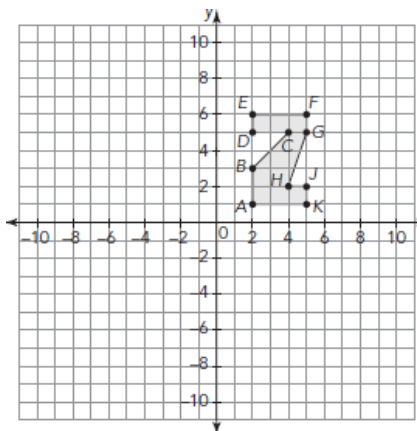
In this activity, you will investigate rotating pre-images to understand how the rotation affects the coordinates of the image. A rotation is a rigid motion transformation that turns a figure on a plane about a fixed point, called the center of rotation, through a given angle, called the angle of rotation.

1. Rotate the figure 180° about the origin.

Complete the table with the coordinates of the rotated figure.

Compare the coordinates of the rotated figure with the coordinates of the original figure. How are the values of the coordinates the same? How are they different?

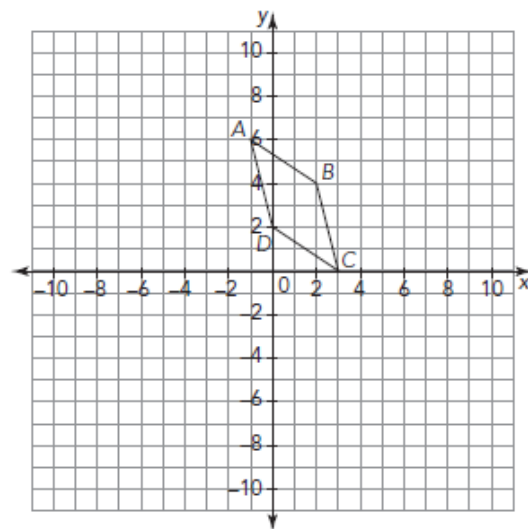
2. Consider the parallelogram shown on the coordinate plane.



Coordinates of Pre-Image	Coordinates of Image
A (2, 1)	
B (2, 3)	
C (4, 5)	
D (2, 5)	
E (2, 6)	
F (5, 6)	
G (5, 5)	
H (4, 2)	
J (5, 2)	
K (5, 1)	

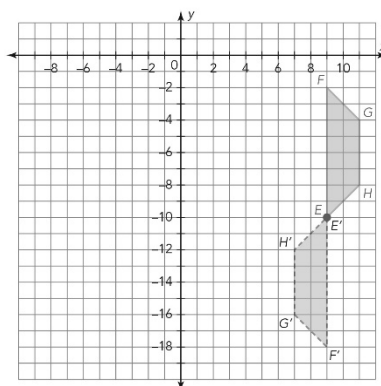
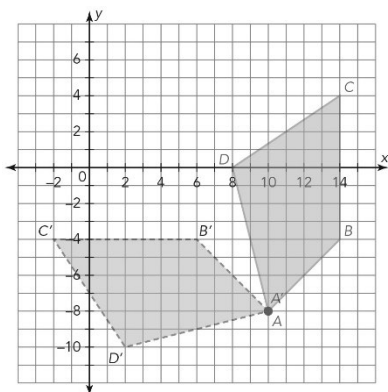
Rotate the figure  $90^\circ$  counterclockwise about the origin.  
Complete the table with the coordinates of the pre-image and the image.

Coordinates of Pre-Image	Coordinates of Image



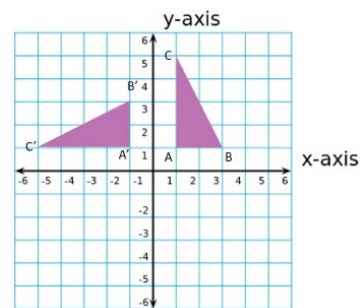
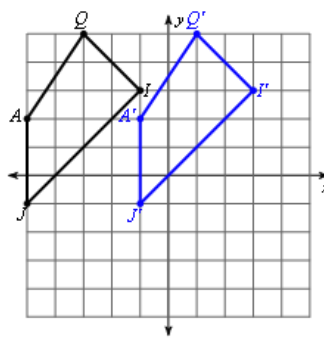
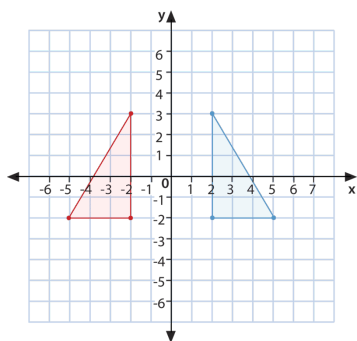
Compare the coordinates of the image and with coordinates of the pre-image. How are the values of the coordinates the same? How are they different?

- Describe the rotation needed to match each pre-image to each congruent image.

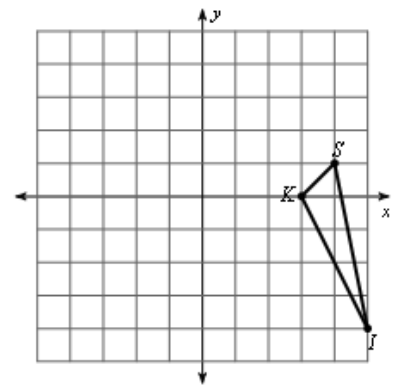


#### Activity 4: Transformation

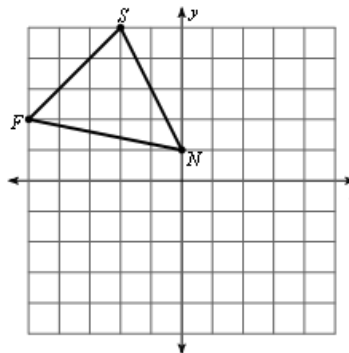
- Identify the transformation(s) used to form the image.



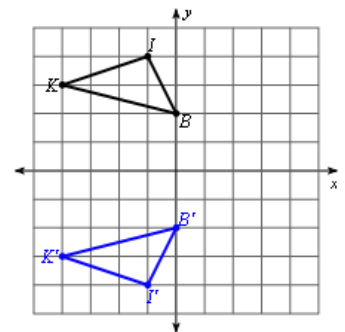
4. Construct the image of the figure using the transformation given.  
Translation: 3 units to the left and 4 units up  
Are the triangles congruent? Explain how you know.



5. Construct the image of the figure using the transformation give.  
Rotation:  $90^\circ$  counter clockwise around the origin  
Are the triangles congruent? Explain how you know.



6. The vertices of  $\triangle JKL$  have the following coordinates:  
 $J(1,0)$ ,  $K(3,4)$ ,  $L(1,4)$  if  $\triangle J'K'L'$  is reflected over the x-axis, what are the new coordinates for vertex  $L'$ ?



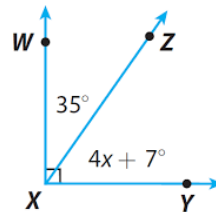
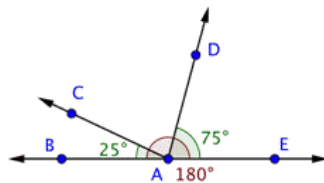
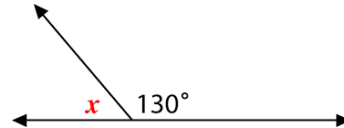
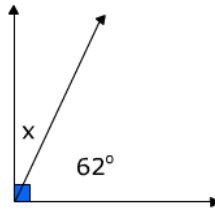
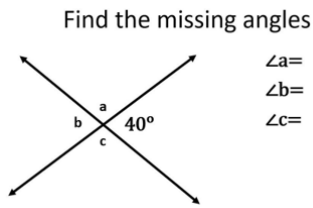
7. Describe a sequence of transformation(s) to create the congruent figure.

#### Activity 5: Angles

Type of Angle	Description	Example
Acute Angle	An angle that is greater than $0^\circ$ and less than $90^\circ$ .	
Right Angle	An angle that is exactly $90^\circ$ .	
Obtuse Angle	An angle that is greater than $90^\circ$ and less than $180^\circ$ .	
Straight Angle	An angle that is exactly $180^\circ$ .	
Adjacent Angles	Adjacent angles are two angles that share a common vertex and share a common side.	
Complementary Angles	Two angles are complementary angles when the sum of their angle measures is equal to $90^\circ$ .	
Congruent Angles	Congruent angles are angles that are equal in measure.	
Supplementary Angles	Two angles are supplementary angles when the sum of their angle measures is equal to $180^\circ$ .	
Vertical Angles	A pair of non-adjacent angles formed when two lines intersect. There are two pair of vertical angles	

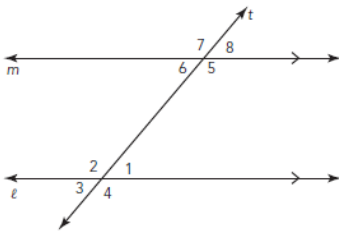
	with intersection lines. Vertical Angles are congruent.	
--	---	--

1. Determine the measure of the missing angle in each diagram.



### Activity 6: Angles

Arrowheads in diagrams indicate parallel lines. Lines or segments with the same number of arrowheads are parallel. In this diagram the two parallel lines,  $m$  and  $\ell$ , are intersected by a transversal,  $t$ . A transversal is a line that intersects two or more lines.



There is a special relationship between angles like  $\angle 1$  and  $\angle 6$  or  $\angle 2$  and  $\angle 5$ . **Alternate interior angles** are angles formed when a transversal intersects two other lines. These angle pairs are on opposite sides of the transversal and are between the two other lines. **Alternate exterior angles** are also formed when a transversal intersects two lines. These angle pairs are on opposite sides of the transversal and are outside the other two lines. **Corresponding angles** are angles that are in the same relationship in connection with the transversal. **Same-Side**

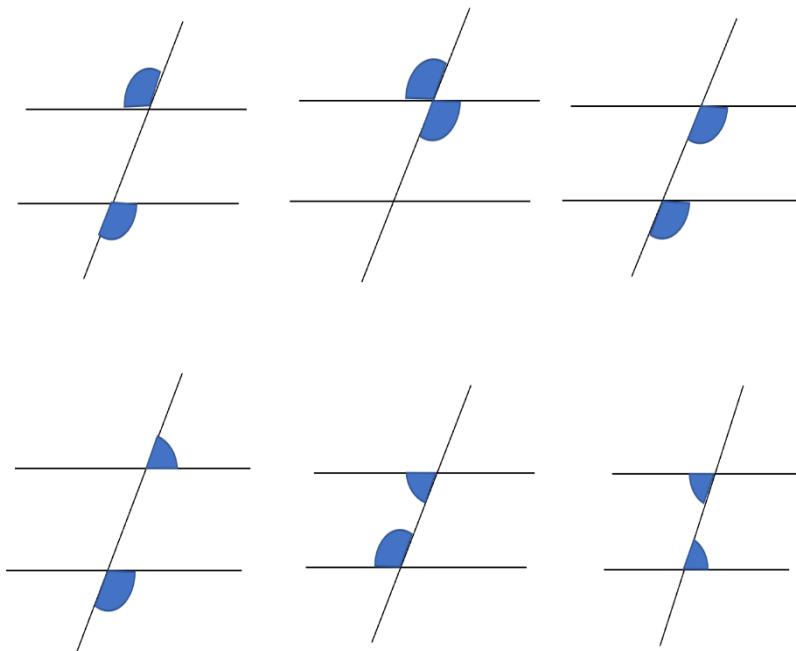
**Interior Angles or Consecutive Interior Angles** are angle pairs on the same side of the transversal between the lines. **Same-Side Exterior Angles or Consecutive Exterior Angles** are angle pairs on the same side of the transversal outside of the lines.

1. Complete each statement using the image above and the definitions provided

- $\angle 1$  and  $\angle 5$  are \_\_\_\_\_
- $\angle 1$  and  $\angle 6$  are \_\_\_\_\_
- $\angle 1$  and  $\angle 8$  are \_\_\_\_\_
- $\angle 3$  and  $\angle 8$  are \_\_\_\_\_
- $\angle 3$  and  $\angle 7$  are \_\_\_\_\_
- $\angle 3$  and  $\angle 6$  are \_\_\_\_\_

2. Identify the angle pair in each image.

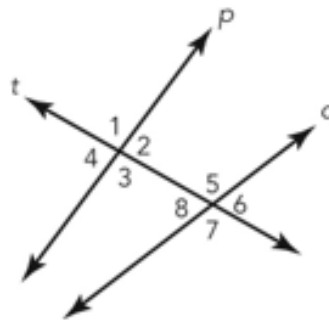




### Activity 7: Angles

In the diagram, transversal  $t$  intersects line  $p$  and  $q$ . Classify each pair of angles as *vertical*, *linear*, *corresponding*, *same-side exterior*, *same-side interior*, *alternate interior*, or *alternate exterior*.

1. Angle 1 and 2
2. Angle 1 and 3
3. Angle 1 and 6
4. Angle 3 and 7
5. Angle 2 and 8
6. Angle 1 and 7
7. Angle 4 and 7
8. Angle 6 and 8
9. Angle 3 and 4
10. Angle 2 and 6
11. Angle 2 and 5
12. Angle 3 and 5



### Activity 8: Angles

**Alternate Exterior angles** are congruent if the lines intersected by the transversal are parallel.

**Alternate Interior angles** are congruent if the lines intersected by the transversal are parallel.

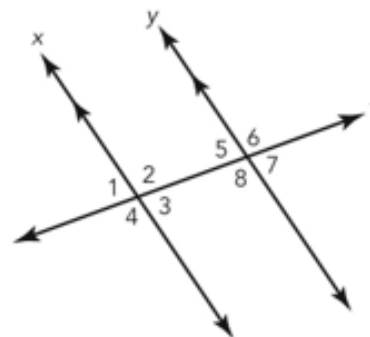
**Corresponding angles** are congruent if the lines intersected by the transversal are parallel.

**Same Side Exterior angles** are supplementary if the lines intersected by the transversal are parallel.

**Same Side Interior angles** are supplementary if the lines intersected by the transversal are parallel.

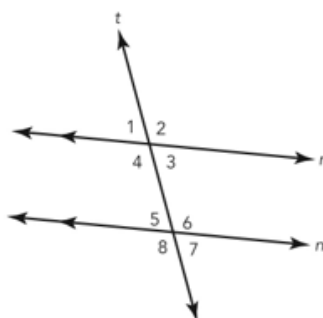
Use the diagram to answer each question.

1. Identify the angles that are congruent to angle 6.
2. Identify the angles that are supplementary to angle 6.
3. Identify the angles that are neither congruent nor supplementary to angle 6.
4. Identify the angles that are congruent to angle 3.
5. Identify the angles that are supplementary to angle 3.
6. Identify the angles that are neither congruent nor supplementary to angle 3.



In the diagram, transversal  $t$  intersects parallel lines  $m$  and  $n$ . Suppose that the measure of angle 4 is 106 degrees. Classify the given angle pair. Then determine each measure.

7.  $\angle 4$  and  $\angle 1, m\angle 1 =$
8.  $\angle 4$  and  $\angle 2, m\angle 2 =$
9.  $\angle 4$  and  $\angle 3, m\angle 3 =$
10.  $\angle 4$  and  $\angle 8, m\angle 8 =$
11.  $\angle 4$  and  $\angle 5, m\angle 5 =$
12.  $\angle 4$  and  $\angle 7, m\angle 7 =$

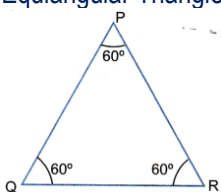


### Activity 9: Triangles

Add the definitions of each triangle to the table below.

#### Types of Triangles

By Side	By Angle
<p>Equilateral Triangle</p>	<p>Acute Triangle</p>
<p>Isosceles Triangle</p>	<p>Right Triangle</p>
<p>Scalene Triangle</p>	<p>Obtuse Triangle</p>

	<p><b>Equiangular Triangle</b></p> 
--	--

The angles of a triangle add up to 180°.

**Activity 10:** Triangles  
Cut several straws into lengths of 1, 2, 3, 4, 5, and 6 inches.  
Choose any three pieces and see if they fit together to form a triangle. Record information in the table provided.

Length of Straw 1	Length of Straw 2	Length of Straw 3	Forms a triangle yes or no
1 inch	2 inches	3 inches	No
1 inch	3 inches	6 inches	No
2 inches	3 inches	4 inches	Yes

- When will three segments form a triangle? Use your results to make a conjecture.
- Can these number be the lengths of the sides of a triangle? Explain how you determine yes or no with writing out inequality statements.  

5, 7, 9
7, 2, 3
13, 6, 7
- A triangle has sides of length 6 and 8. What can you say about the possible lengths for the third side?
- A triangle has sides of length  $7\frac{1}{2}$  and  $9\frac{1}{2}$ . What can you say about the possible lengths for the third side?
- Suppose a 12-inch stick is marked at one-inch intervals. At which two intervals can the stick be broken so that the three pieces fit together to form a triangle?

**Activity 11:** Triangles

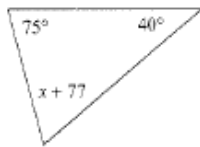
Find the measure of each angle indicated.

1)



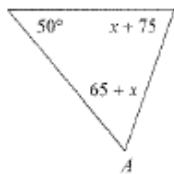
Solve for  $x$ .

2)



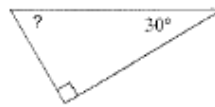
Find the measure of angle A.

3)



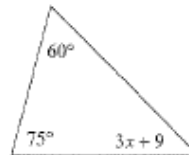
Find the measure of each angle indicated.

1)



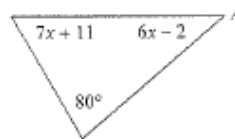
Solve for  $x$ .

2)



Find the measure of angle A.

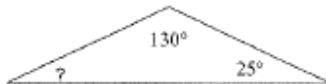
3)



### Activity 12: Triangles

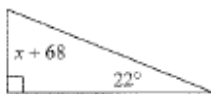
Find the measure of each angle indicated.

1)



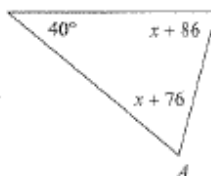
Solve for  $x$ .

2)



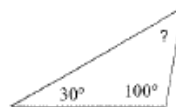
Find the measure of angle A.

3)



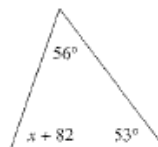
Find the measure of each angle indicated.

1)



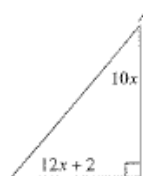
Solve for  $x$ .

2)



Find the measure of angle A.

3)



**Appendix B: Get Ready for Algebra 1 and Algebra 2** Use other paper for work if you need more space**Activity 1** Number and Quantity Exponents

**Exponent** a quantity representing the power to which a given number or expression is to be raised, usually expressed as a raised symbol beside the number or expression.

Complete the following looking for patterns and be prepared to write up mathematical noticing and wonderings.

$$3^5 = 3 \cdot 3 \cdot 3 \cdot 3 \cdot 3 = \underline{\hspace{2cm}}$$

$$3^4 = 3 \cdot 3 \cdot 3 \cdot 3 = 81$$

$$3^3 = 3 \cdot 3 \cdot 3 = 27$$

$$3^2 = 3 \cdot 3 = \underline{\hspace{2cm}}$$

$$3^1 = 3$$

$$3^0 = 1$$

$$3^{-1} = \frac{1}{3}$$

$$3^{-2} = \frac{1}{3} \cdot \frac{1}{3} = \frac{1}{9}$$

$$3^{-3} = \frac{1}{3} \cdot \frac{1}{3} \cdot \frac{1}{3} = \frac{1}{27}$$

$$3^{-4} = \frac{1}{3} \cdot \frac{1}{3} \cdot \frac{1}{3} \cdot \frac{1}{3} = \underline{\hspace{2cm}}$$

$$3^{-5} = \frac{1}{3} \cdot \frac{1}{3} \cdot \frac{1}{3} \cdot \frac{1}{3} \cdot \frac{1}{3} = \underline{\hspace{2cm}}$$

Complete the following table of exponent properties

Property of Exponents	Verbal Description	Algebraic Form	Numerical Example
Product of Powers		$a^m a^n = a^{m+n}$	
Quotient of Powers		$\frac{a^m}{a^n} = a^{m-n}$	
Negative Power		$a^{-m} = \frac{1}{a^m}$ and $\frac{1}{a^{-n}} = a^n$	
Zero Power		$a^0 = 1$	
Power of a Power		$(a^m)^n = a^{mn}$	
Power of a Product		$(a^m b^p)^n = a^{mn} b^{pn}$	
Power of a Quotient		$\left(\frac{a^m}{b^p}\right)^n = \frac{a^{mn}}{b^{pn}}$	

**Activity 2** Number and Quantity Exponents

Rewrite each expression in the form  $kx^n$  or  $\frac{k}{x^n}$ , where  $k$  is a real number,  $n$  is a non-negative integer, and  $x$  or other variable is a nonzero real number.

1.  $13^0 =$

4.  $5^3 =$

7.  $5^{-3} =$

10.  $3^4 \cdot 3^7$

$$2. \frac{2^7}{2^3} =$$

$$3. \left(\frac{w}{9}\right)^2 =$$

$$5. (3y^2)^3$$

$$6. 2d^2d^3 =$$

$$8. 4a^0 =$$

$$9. a^0b^0c^0 =$$

$$11. k^{-1} =$$

$$12. (km^2)^3 =$$

13. Tell whether each statement is sometimes, always, or never true.

	Sometimes	Always	Never
If $a$ is a positive integer, then $x^{-a} = \frac{1}{x^a}$			
If $x$ is positive, then $x^{-n}$ is negative			
If $n$ is zero, then $x^{-n}$ is 1			
If $n$ is a negative integer, then $x^{-n}$ is 1			
If $x$ is zero, then $x^{-n}$ is 1			
If $n$ is an integer, then $x^{-n}$ is greater than 1.			

14. Which is not equivalent to the other three?

$$\frac{1}{25}$$

$$5^{-2}$$

$$0.04$$

$$-25$$

15. Select all that are equivalent to  $\frac{1}{6^2}$

☐ 36

☐  $\frac{1}{36}$

☐  $\left(\frac{1}{6}\right)^2$

☐  $\left(\frac{1}{6}\right)\left(\frac{1}{6}\right)$

☐ 3.6

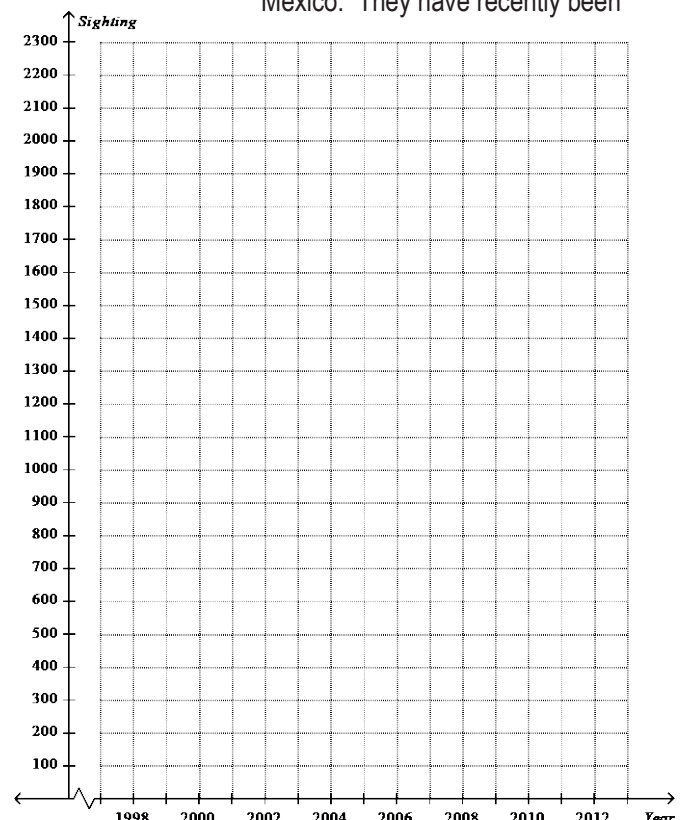
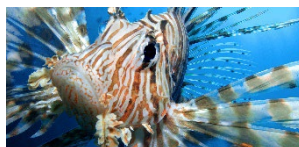
### Activity 3 Number and Quantity

The lionfish is a fish that is native to the western Pacific Ocean. The lionfish began appearing in the western Atlantic Ocean in 1985. This is probably because people bought them as pets and then dumped them in waterways leading to the ocean. Because it has no natural predators in this area, the number of lionfishes grew very quickly and now has large populations throughout the Caribbean as well as along the eastern coastline of the United States and the Gulf of Mexico. They have recently been spotted as far north as New York and Rhode Island.

The table below shows the number of new sightings by year reported to NAS (Nonindigenous Aquatic Species), which is a branch of the U.S. Geological Survey Department.

Make a scatterplot of the year versus the total number of sightings.

Year	Total Number of Sightings
1998	5
1999	6
2000	12
2001	27
2002	77
2003	122
2004	179
2005	222
2006	273
2007	459
2008	622
2009	1289



Use your model to predict the total number of lionfish sightings by the



end of 2010.

**Activity 4** Number and Quantity Rational and Irrational

**Rational Number** is a number that can be expressed as a ratio or fraction of two integers.

**Irrational Number** all the real numbers which are not rational numbers or a number that cannot be expressed as the ratio of two integers. e.g.  $\pi$  and  $\sqrt{2}$

1. Determine for each number whether it is a rational or irrational. Mark the correct column for each number.
2. Select True or False to indicate whether each comparison is true.
3. Determine for each number whether is rational or irrational after performing the operation. Mark the correct column.

	Rational	Irrational
$-3 + 8$		
$3\sqrt{2}$		
$-7\sqrt{36}$		
$\sqrt{3 + 4}$		

	True	False
$(-3)^2 = -(3)^2$		
$5\frac{1}{4} = \frac{21}{4}$		
$\sqrt{49} > 6.8$		
$\sqrt{7} < 3$		

Number	Rational	Irrational
$-\sqrt{64}$		
$-5\frac{1}{4}$		
$\sqrt{3}$		
$\frac{56}{7}$		

4. Fill in the numbers to create a mathematical expression that is rational or irrational as marked in the table.

	Rational	Irrational
$\underline{\hspace{1cm}} + \underline{\hspace{1cm}}$		x
$\frac{2}{3}(\underline{\hspace{1cm}})$	x	
$5(\underline{\hspace{1cm}})$		x
$\sqrt{\underline{\hspace{1cm}}} + 7$	x	

**Activity 5** Functions

A relation is the mapping between a set of input values called the domain and a set of output values called the range. Function notation is a way of representing functions algebraically.

A relation can be represented in the following ways.

The function notation  $f(x)$  is read as “f of x” and indicates that x is the independent variable.

If  $f$  is a function and  $x$  is an element of its domain, then  $f(x)$  denotes the output of  $f$  corresponding to the input  $x$ .

The Vertical Line Test is a visual method used to determine whether a relation represented as a graph is a function. To apply the Vertical

Line Test consider all the vertical lines that could be drawn on the graph of a relation.

If any of the vertical lines intersect the graph of the relation at more than one point, then the relation is not a function.

#### Ordered Pairs

$\{(-2, 2), (0, 2), (3, -4), (3, 5)\}$

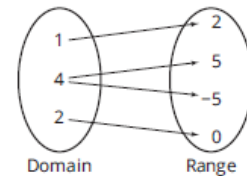
#### Equation

$$y = \frac{2}{3}x - 1$$

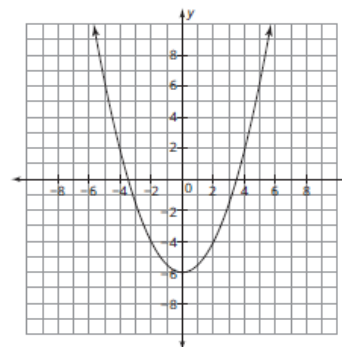
#### Verbal

The relation between students in your school and each student's birthday.

#### Mapping



#### Graph



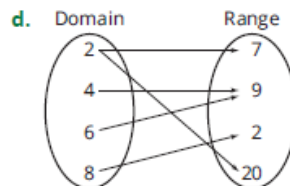
#### Table

Domain	Range
-1	1
2	0
5	-5
6	-5
7	-8

- Determine which relations represent functions. If the relation is not a function, state why not.
  - $y = 3x - 2$
  - For every house, there is one and only one street address.

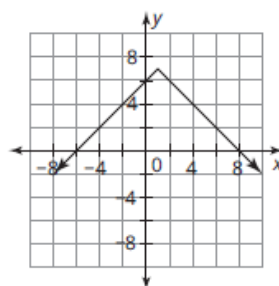
c.

Domain	Range
-1	4
0	0
3	-2
0	4



e.  $\{(-7, 5), (-5, 5), (2, -2), (3, 5)\}$

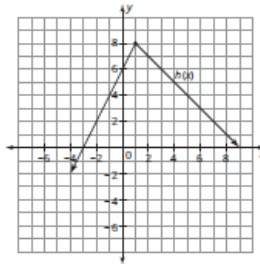
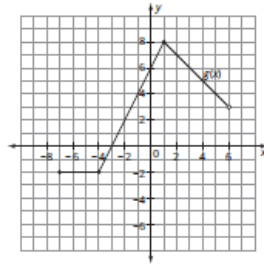
f.



## Activity 6 Functions

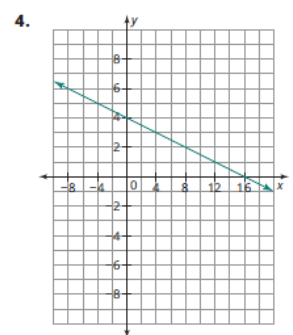
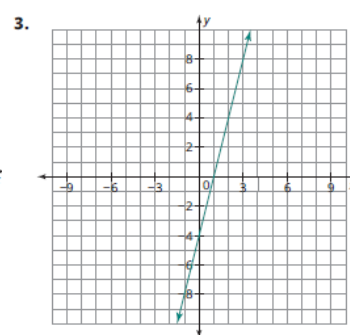
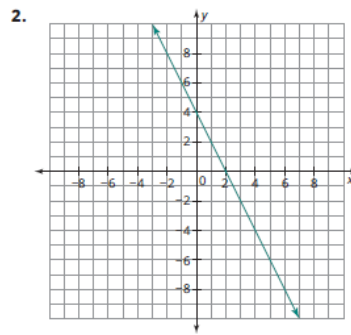
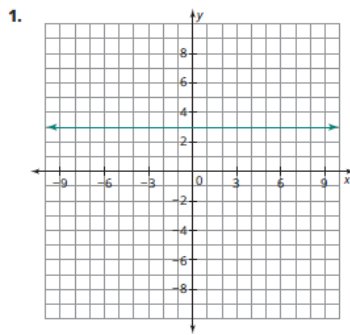
### Worked Example

There are different ways to write the domain and range of a function given its graph.



	Domain		Range	
	$g(x)$	$h(x)$	$g(x)$	$h(x)$
In Words	The domain is all real numbers greater than or equal to $-7$ and less than $6$ .	The domain is the set of all real numbers.	The range is all real numbers greater than or equal to $-2$ and less than or equal to $8$ .	The range is all real numbers less than or equal to $8$ .
Using Notation	$-7 \leq x < 6$	$-\infty < x < \infty$	$-2 \leq y \leq 8$	$y \leq 8$

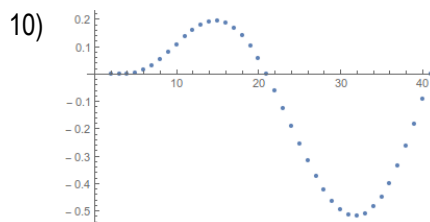
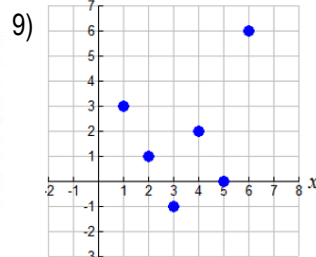
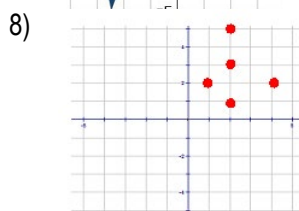
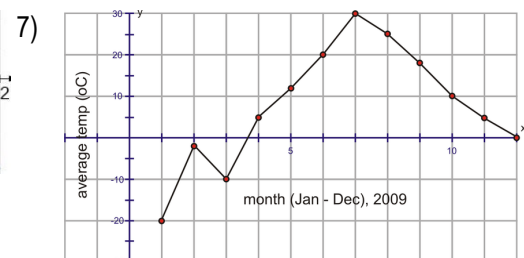
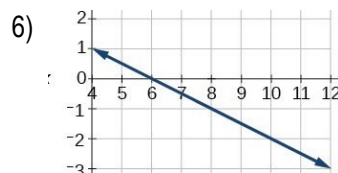
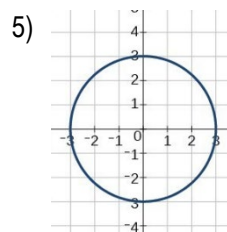
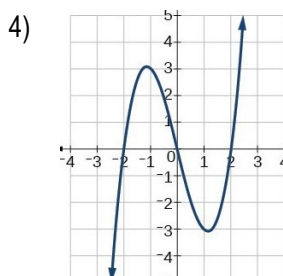
For each graph determine the following: y-intercept, x-intercept, slope, domain, range



## Activity 7 Functions

State if the following is a function or not. Explain/Show why a function or not. If a Function give the domain and range.

- 1)  $\{(2, 6), (-2, 5), (7, -13), (1, 0)\}$
- 2)  $\{(12, 0), (0.74, 18), (2, 5), (12, 7)\}$
- 3)  $\{(-1, 8), (-4, 8), (3, 8), (14, 8), (-4, 8)\}$



12)

x	-8	-5	-2	1	4
y	-3	-3	-3	-3	-3

13)

x	-8	-8	-2	-2	3
y	-2	-2	0	2	5

### Activity 8 Functions

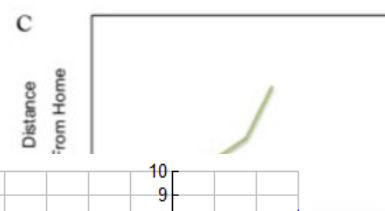
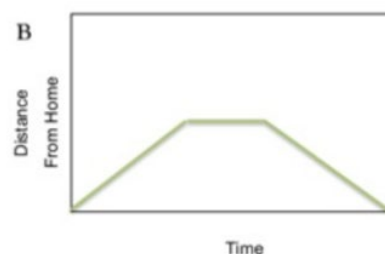
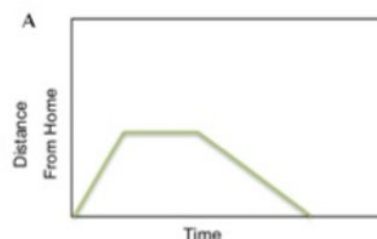
Think like a mathematician! Connect graphs to problem situations connecting to math you know.

Situation 1: Jaquan lives at the bottom of a hill. He climbed slowly up the hill, walked across the top, and then ran down the other side.

Situation 2: Jaquan walked to the store at the end of his street stopped to buy a bottle of water, and then walked home.

Situation 3: Jaquan went for a run. He ran to the store at the end of his street, stopped to buy a bottle of water, and then walked home.

Add the words increasing, decreasing, and constant to each graph were appropriate to help connect the situation to the graph.



### Activity 9 Functions

1. The graph of a function is shown. Some answer maybe approximation.

- What is the value of  $x$  when  $f(x) = -3.2$ ?
- What is the value of  $x$  when  $f(x) = 0$ ?
- What is the value of  $x$  when  $f(x) = 8$ ?
- What is  $f(-4) = ?$
- What is  $f(0) = ?$
- What is  $f(2) = ?$

2. The table of a function is shown.

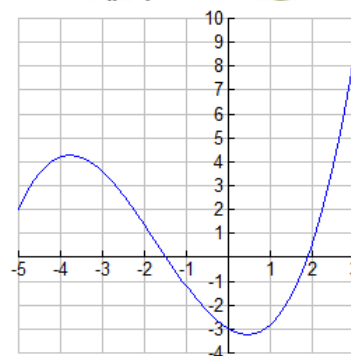
$x$	$f(x)$
2	6
4	12
6	18
8	24

- What is the value of  $f(6)$ ? \_\_\_\_\_
- What is the value of  $f(2)$ ? \_\_\_\_\_
- What is the value of  $x$  when  $f(x) = 6$ ? \_\_\_\_\_
- What is the value of  $x$  when  $f(x) = 24$ ? \_\_\_\_\_

3. The table of a function is shown.

$x$	$f(x)$
-3	-8
-2	-3
-1	0
0	1

- What is the value of  $f(-3)$ ? \_\_\_\_\_
- What is the value of  $f(0)$ ? \_\_\_\_\_
- What is the value of  $x$  when  $f(x) = -3$ ? \_\_\_\_\_
- What is the value of  $x$  when \_\_\_\_\_



$$f(x) = 0 ? \underline{\hspace{2cm}}$$

### Activity 10 Linear

Determine the slope and y-intercept of the linear relationship.

1.  $f(x) = \frac{2}{3}x - 12$

Slope:

y-intercept:

2.  $y + 2x = 7$

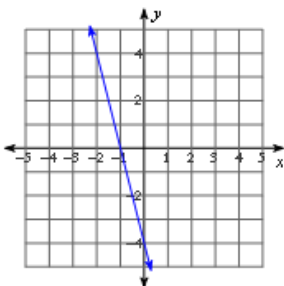
Slope:

y-intercept:

3.

Slope:

y-intercept:



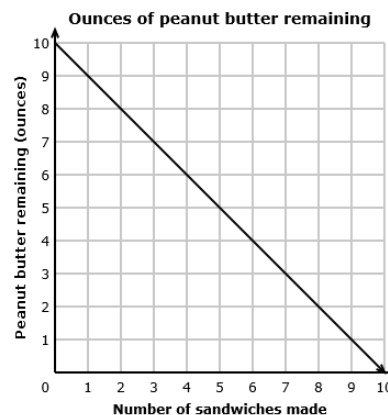
4.

Slope:

y-intercept:

x	-2	0	2	4	6	8	10
y	9	8	7	6	5	4	3

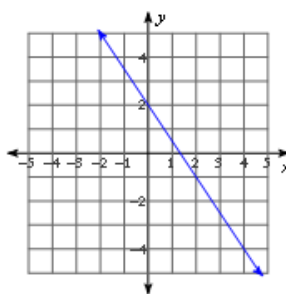
5. The following graph shows the amount of peanut butter Betty has left in the jar compared to the number of sandwiches she makes. Find the slope and y-intercept of the graph and explain what they mean in the context of the problem.



### Activity 11 Linear

1. Write the linear equation with slope of  $\frac{1}{2}$  and y-intercept of -6.

2. Write the linear equation of the given graph?



3. Write the linear equation from the data table?

x	y
1	0
2	1
3	2
4	3

4. A car is traveling at 45 mi/hr.  
Write an equation that models the total distance  $d$  traveled after  $h$  hours.

5. In the above 4 problems which linear relationship has the greatest rate of change? Explain.

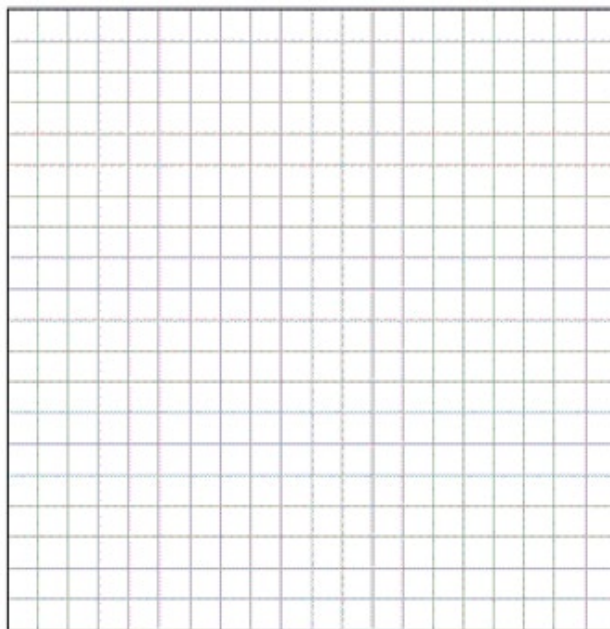
### Activity 12 Linear

Yellowstone is famous for its geysers, especially one commonly referred to as Old Faithful. A geyser is a spring that erupts intermittently, forcing a fountain of water and steam from a hole in the ground. Old Faithful can have particularly long and predictable eruptions. As a matter of fact, park rangers have observed the geyser over many years and have developed patterns they use to

predict the timing of the next eruption. The following link will take you to information and talks about predicting Old Faithful and a live-streaming webcam. <https://www.yellowstonepark.com/things-to-do/about-old-faithful>

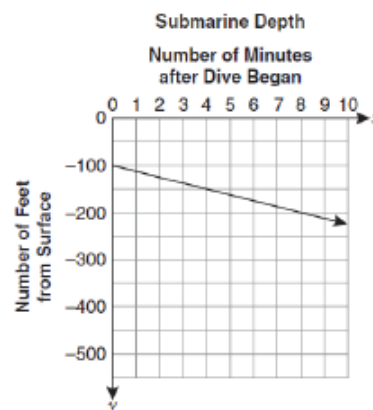
Length of Eruption (in minutes)	Approximate Time Until Next Eruption (in minutes)
1	46
2	58
3	70
4	82

- Why might it be important for a park ranger to be able to predict the timing of Old Faithful's eruptions?
- If an eruption lasts 6 minutes, about how long must visitors wait to see the next eruptions? Explain your reasoning using the patterns you identified in the table.
- You visit Old Faithful to find a sign indicating they had missed an eruption and that it would be approximately 2 hours before the next one. How long was the eruption you missed? Explain how you determined your answer.
- Let  $n$  represent the number of minutes an eruption lasts. Write an expression using the variable  $n$  that could be used to determine the waiting time until the next eruption.
- Create a graph of your data from the table. Discrete or continuous?
- Give the domain and range.



### Activity 13 Linear

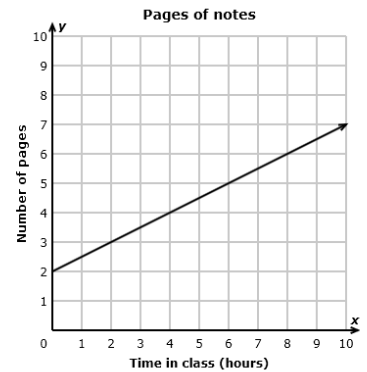
- A submarine is diving under water. The depth of the submarine is described by this graph.
  - Identify the y-intercept of this graph and describe the meaning.
  - Interpret the slope for this situation.
- A bakery carries both 9-inch pies and 4-inch mini pies. The shelves of a display case in the bakery are 6 feet long. The equation represents the possible combination of pies that fit along the length of each shelf.  $9x + 4y = 72$ 
  - Determine the value of the y-intercept in this equation.



b. Describe the meaning of the y-intercept  $t$  in terms of both 9-inch pies and 4-inch mini pies.

3. The graph shows how the total pages of notes in Keon's notebook depend on the number of hours he spends in class taking notes.

- Identify the y-intercept of this graph and describe the meaning.
- Interpret the slope for this situation.



4. Data was collected on the depth of a dive of penguins and the duration of the dive. The following liner model is a good summary of the data, where  $t$  is the duration of the dive in minutes and  $d$  is the depth of the dive in yards. The equation for the model is  $d = 0.015 + 2.915t$

- Determine the value of the y-intercept in this equation.
- Describe the meaning of the slope in this equation.

### Appendix C: Solving Use other paper for work if you need more space

#### Activity 1

**Solution** an action or process of solving a problem. **Solution** and answer to a problem. **Solution** a set of values of the variables that satisfies an equation. **Solution** makes a mathematical statement true.

1. Describe and correct the error in solving the equation.

$$\begin{aligned} \text{a. } 7 - 3x &= 12 \\ 4x &= 12 \\ \frac{4x}{4} &= \frac{12}{4} \\ x &= 3 \end{aligned}$$

$$\begin{aligned} \text{b. } -2x + x &= 10 \\ -x &= 10 \\ x &= 10 \end{aligned}$$

2. What is the same and different in each problem

$$\begin{aligned} \text{a. } 3x - 8 + 2x &= 7 \\ \text{b. } -2(2x - 5) &= 10 \end{aligned}$$

$$\begin{aligned} \text{c. } 5x - 8 &= 7 \\ \text{d. } -4x + 10 &= 10 \end{aligned}$$

3. The following is Melissa's first step in solving the following equation.

$$6 + \frac{x}{3} = -2 ?$$

$$\text{Step 1: } 6 + \frac{x}{3} - 6 = -2 - 6$$

The following is Andre's first step in solving the following equation.

$$6 + \frac{x}{3} = -2 ?$$

$$\text{Step 1: } 3(6 + \frac{x}{3}) = (-2)3$$

Both first steps are correct. Which method would you pick to solve the equation?

4. Describe the first step you would take to solve in words and then show the math.

$$-8 = \frac{1}{9}(-9r + 27)$$

5. Write out the equation for Step 1 in the solution process below.

$$5x - 4(x - 3) = 17$$

Step 1:

Step 2:

Step 3:

$$x + 12 = 17$$

$$x = 5$$

6. Ray worked the following problem. Is Ray's process and answer correct? If you disagree with Ray's process and answer, circle the step(s) with the mistake, explain his mistake(s) and then correctly work the problem.

$$2 - (x + 7) = -23$$

Ray's work

Step 1:  $2 - x + 7 = -23$

Step 2:  $9 - x = -23$

Step 3:  $9 - x + 9 = -23 + 9$

Step 4:  $-x = -14$

Step 5:  $-1(-x) = -1(-14)$

Answer:  $x = 14$

## Activity 2

1. Equivalent equations have the same solution set. Select Yes or No to indicate whether each equation is equivalent to this equation:

$$4x + 3 = \frac{5}{2}x - 7$$

Equation	Yes	No
$4x = \frac{5}{2}x - 4$		
$8x + 3 = 5x - 7$		
$4x = \frac{5}{2}x - 10$		

2. Decide if either student's work is correct and be ready to defend your answer.

The following is Ella's work:

$$\begin{aligned} 3(x + 5) &= 3x + 15 \\ 3x + 5 &= 3x + 15 \\ 5 &= 15 \end{aligned}$$

The equation has no solution.

The following is Evan's work:

$$\begin{aligned} 6(2y + 6) &= 4(9 + 3y) \\ 12y + 36 &= 36 + 12y \\ 12y &= 12y \\ 0 &= 0 \end{aligned}$$

The solution is  $y = 0$ .

3. Fill in a description for each step of the problem and give the solution.

$7h + 2 = 4h - 10$	Original equation
$7h + 2 - 4h = 4h - 10 - 4h$	
$3h + 2 = -10$	
$3h + 2 - 2 = -10 - 2$	
$3h = -12$	
$\frac{3h}{3} = \frac{-12}{3}$	
$h =$	Solution

4. Use the justifications on the right to solve the equation.

$4(2j + 1) = 2(j - 13)$	Original equations
	Distributive Property
	Multiply
	Subtract from both sides (subtraction property of equality)
	Simplify (Combine like terms)
	Subtract from both sides (subtraction property of equality)
	Simplify (Combine like terms)
	Divide both sides (division property of equality)



**Activity 3**

Solve each equation.

1.  $3a - 2 = 13$

6.  $3g + 11 = 2g - 5$

10.  $3n + 2(n - 1) = 9n + 4$

2.  $-5b - 10 = -60$

7.  $4h + 2h - 11 = 6h + 17$

11.  $3(p - 2) + p = 6(p + 3) - 4p$

3.  $4c - 5 + 2c = -2$

8.  $0.5j - 3.5 = 0.2j - 0.5$

12.  $5(q - 2) + q = 6(q + 3) - 4$

4.  $\frac{d-8}{3} = 3$

9.  $6 - 2(k+6) = 3k + 4$

5.  $8f - 5 = 3f + 15$

**Activity 4**

Solve an equation involving several variables by expressing the variable asked for in terms of the other variables.

1.  $-3a - 7b + 12c = 18$  solve for  $c$ .

2.  $y - 7 = \frac{1}{2}(4x - 12)$  solve for  $x$ .

3.  $2x + 3y = 21$  solve for  $y$ .

4.  $A = bh$  solve for  $h$

5.  $V = \frac{1}{3}Bh$  solve for  $h$ .

6.  $C = 2\pi r$  solve for

## Appendix D: High School and Beyond Plan 9<sup>th</sup> Grade

# high school & beyond plan CHECKLIST

Most up-to-date HSBP  
Checklists can be found  
at [www.fwps.org/HSBP](http://www.fwps.org/HSBP)

GRADE



### REQUIRED

### CHECK BOXES ARE REQUIRED.

- Bulleted items are highly recommended.

MaiaLearning activities/tasks  
are in color bands.

Each year, middle and high school scholars are **required** to complete components to build their High School and Beyond Plan (HSBP). At right is a monthly timeline for scholars to follow that will help them stay on track with their activities/tasks.

Scholars will present their HSBP progress in the spring each year at Scholar-Led Conferences (SLC), Advisories or during other culminating activities.

The HSBP tasks are completed within Maia-Learning, an online college/career exploration platform and portfolio. Activities/tasks are also listed on the MaiaLearning Dashboard.

Scholars can access their **MaiaLearning** account by visiting: [www.malalearning.com](http://www.malalearning.com) and clicking "Sign in with Google" and login with their Gmail (P12) account (example: ###@p12fwps.org) and password.

EACH SCHOLAR:  
A VOICE.  
A DREAM.  
A BRIGHT FUTURE.



FEDERAL WAY  
PUBLIC SCHOOLS

AUG	<ul style="list-style-type: none"> <li>Attend Freshmen Orientation and other back to school events so you can get to know your new high school.</li> </ul>
SEPTEMBER	<ul style="list-style-type: none"> <li>Complete the "Freshmen Fall Survey" in your Career Activities and Tasks List.</li> <li>Turn "ON" Text/SMS Messaging setting in "My Account" under the person image icon in the top right, to receive personalized email/text messages regarding career and college field trips, experiences and support.</li> <li>Complete the "Personality Assessment" in the Explore Section.</li> <li>Explore your interests and leadership opportunities by participating in sports, school clubs, music or drama groups, or community based organizations or volunteer activities.</li> </ul>
OCTOBER	<ul style="list-style-type: none"> <li>Complete the "Intelligences Assessment" in the Explore Section.</li> <li>Complete the "Learning and Productivity Assessment" in the Explore Section.</li> <li>Create 4 SMART Goals for the year in the Portfolio Section (College Goal, Career Goal, Financial Aid Goal and Academic Goal).</li> <li>Take the PSAT test for free at school during PSAT/SAT School Day. This is good practice for the SAT, and in 11th grade certain test scores on the PSAT can qualify you for the National Merit Scholarship. Taking this test in 9th grade will help you better prepare.</li> <li>Attend college and career fairs with parents/guardians including the Life After High School District College and Career Fair and others such as the NACAC National College Fair.</li> </ul>
NOVEMBER	<ul style="list-style-type: none"> <li>Make a plan for completing your required 24 hours of community service (<a href="http://www.fwps.org/communityservice">www.fwps.org/communityservice</a>).</li> <li>Review graduation requirements at Scholar Led Conferences (SLC) and create a plan to stay on track with your HSBP and grades to maintain a good Grade Point Average (GPA).</li> </ul>
DECEMBER	<ul style="list-style-type: none"> <li>Complete the "Interest Profiler Assessment" in the Explore Section and research 3-5 suggested careers from your assessment results. Learn about the tasks, education and training necessary for each career.</li> <li>Create your "Career List" by clicking the Heart icon and clicking "Add to Career Plan" in the Career Plan Section and review career plan summaries.</li> <li>Identify 9-12 post-secondary pathway choices such as college (Target School, Likely School and Stretch School), training, certificate and/or employment. View programs related to your career in the "Education Level" area of career summaries in the "Career List" and use the College Plan Section to click on the Heart icon to add colleges you are considering and applying to. If your pathway is not listed in the college section, then complete a journal entry to list the pathway you are pursuing.</li> <li>Find out about entry requirements at the post-secondary pathways that you are interested in pursuing. Scholars will present their HSBP progress in the spring each year at SLCs, Advisories or during other culminating activities.</li> </ul>

POST-  
SECONDARY  
COLLEGE,  
TRAINING,  
CERTIFICATE &  
EMPLOYMENT  
PATHWAYS

2-YEAR TECHNICAL

2-YEAR TRANSFER

4-YEAR

4-YEAR  
MILITARY ACADEMY

4-YEAR  
MILITARY ROTC

APPRENTICESHIP/  
TRADE

MILITARY ENLISTED

WORKFORCE

## high school & beyond plan CHECKLIST | GRADE 9

### REQUIRED

#### CHECK BOXES ARE REQUIRED.

- Bulleted items are highly recommended.

MaiaLearning activities/tasks are in color bands.

JANUARY	<ul style="list-style-type: none"> <li>Review Transcript and create and update your "Academic Planner" in the Academic Plan Section in preparation for course registration. Credit Analysis forms are available in the counseling office, career center or at <a href="http://www.fwps.org/CCR">www.fwps.org/CCR</a>.</li> <li>Find out about Dual Credit opportunities at your school where you can earn credit in high school through certain test scores on AP, IB or Cambridge exams or through completion of CTE, College in the High School Courses or Running Start courses.</li> <li>Review your PSAT results, and organize your plan for taking the PSAT next year. View your PSAT scores at <a href="http://studentscores.collegeboard.org">studentscores.collegeboard.org</a>, and send your scores to Khan Academy* for a free, personalized PSAT practice plan based on your test results.</li> <li>If you have the College Bound Scholarship, review requirements and repledge your commitment so that you can access your scholarship. More info at <a href="http://readysetgrad.wa.gov/collegebound">readysetgrad.wa.gov/collegebound</a>.</li> </ul>
FEBRUARY	<ul style="list-style-type: none"> <li>Search for scholarships in the "Scholarship Search," Career Center, <a href="http://washboard.org">washboard.org</a>, and/or post-secondary websites.</li> <li>Think about how you will pay for your post-secondary education and discuss options with your family about how to save and budget for your education and life after high school.</li> <li>Prepare for sophomore year course registration by meeting with your counselor, verifying your transcript is accurate, ensuring you are on track for graduation and considering which courses align with your post-secondary plans and which advanced or stretch course(s) to enroll in.</li> <li>Enroll in Career &amp; Technical Education classes that fit your career interests. This will allow you to learn more about this career pathway through the course content and projects along with business and industry speakers and tours.</li> <li>If you are interested in playing sports in college, research the National Collegiate Athletic Association (NCAA) eligibility requirements at <a href="http://ncaaclearinghouse.net">ncaaclearinghouse.net</a> to identify qualifying courses at your school.</li> </ul>
MARCH	<ul style="list-style-type: none"> <li>Complete "Work Values" in the Explore Section.</li> <li>Send letters and contact post-secondary institutions you are considering attending to introduce yourself, explain your interest and ask about ways that you can begin preparing for your future at that campus. Sign on to <a href="http://BigFuture.org">BigFuture.org</a> to discover more planning resources.</li> </ul>
APRIL	<ul style="list-style-type: none"> <li>Create/Update your "Resume" under the Portfolio Section. Keep track of your academic and extracurricular awards, community services achievements and anything else you participate in.</li> <li>Consider creating a business card to distribute to post-secondary institutions or employers at college and career fairs that includes your name, contact information, interest areas, GPA and/or accomplishments in activities and academics such as being in AP, IB, Cambridge courses and exam results. Be sure to create a professional email address to use when communicating.</li> </ul>
MAY	<ul style="list-style-type: none"> <li>Review and assess your 4 SMART Goals for the year in the Portfolio Section (College Goal, Career Goal, Financial Aid Goal and Academic Goal).</li> </ul>
JUNE	<ul style="list-style-type: none"> <li>Update your required hours for community service by logging experience(s) into the Experience Section in the Portfolio.</li> <li>Find an internship/job shadow, participate in summer camps, summer college programs or volunteer activities.</li> </ul>

## Appendix E: High School and Beyond Plan 10<sup>th</sup> Grade

### high school & beyond plan CHECKLIST

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GRADE

10

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EACH SCHOLAR:  
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A DREAM.  
A BRIGHT FUTURE.



FEDERAL WAY  
PUBLIC SCHOOLS

SEPTEMBER	<ul style="list-style-type: none"> <li>Complete the "Sophomore Fall Survey" in your Career Activities and Tasks List.</li> <li>Turn "ON" Text/SMS Messaging setting in "My Account" under the person image icon in the top right, to receive personalized email/text messages regarding career and college field trips, experiences and support.</li> <li>Complete the "Interest Profiler Assessment" in the Explore Section. Learn about the tasks, education and training necessary for each career.</li> <li>Make a plan for completing your required 24 hours of community service (<a href="http://www.fwps.org/communityservice">www.fwps.org/communityservice</a>). Printable forms are also found on the website.</li> <li>Explore your interests and leadership opportunities by participating in sports, school clubs, music or drama groups, or community based organizations or volunteer activities.</li> </ul>
OCTOBER	<ul style="list-style-type: none"> <li>Create or Update 4 SMART Goals for the year in the Portfolio Section (College Goal, Career Goal, Financial Aid Goal and Academic Goal).</li> <li>Take the PSAT test for free at school during PSAT/SAT School Day. This is good practice for the SAT, and in 11th grade certain test scores on the PSAT can qualify you for the National Merit Scholarship. Taking this test in 10th grade will help you better prepare.</li> <li>Attend college and career fairs with parents/guardians including the Life After High School District College and Career Fair and others such as the NACAC National College Fair.</li> </ul>
NOVEMBER	<ul style="list-style-type: none"> <li>Complete the "Intelligences Assessment" in the Explore Section and research 3-5 suggested careers from your assessment results.</li> <li>Update your "Career List" by clicking the Heart icon and clicking "Add to Career Plan" in the Career Plan Section and Review career plan summaries.</li> <li>Review graduation requirements at Scholar Led Conferences (SLC) and create a plan to stay on track with HSBP and your grades to maintain a good Grade Point Average (GPA).</li> </ul>
DECEMBER	<ul style="list-style-type: none"> <li>Identify 6-9 post-secondary pathway choices such as college (Target School, Likely School and Stretch School), training, certificate and/or employment. View programs related to your career in the "Education Level" area of career summaries in the "Career List" and use the College Plan Section to click on the Heart icon to add colleges you are considering and applying to. If your pathway is not listed in the college section, then complete a journal entry to list the pathway you are pursuing.</li> <li>Find out about entry requirements at the post-secondary pathways that you are interested in pursuing. Scholars will present their HSBP progress in the spring each year at SLCs, Advisories or during other culminating activities.</li> </ul>

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SECONDARY  
COLLEGE,  
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PATHWAYS

2-YEAR TECHNICAL

2-YEAR TRANSFER

4-YEAR

4-YEAR  
MILITARY ACADEMY

4-YEAR  
MILITARY ROTC

APPRENTICESHIP/  
TRADE

MILITARY ENLISTED

WORKFORCE

(continued on back)



# high school & beyond plan CHECKLIST | GRADE 10

## REQUIRED

### CHECK BOXES ARE REQUIRED.

- Bulleted items are highly recommended.

MaiaLearning activities/tasks are in color bands.

JANUARY	<ul style="list-style-type: none"> <li>Review Transcript and create and update your "Academic Planner" in the Academic Plan Section in preparation for course registration. Credit Analysis forms are available in the counseling office, career center or at <a href="http://www.fwps.org/CCR">www.fwps.org/CCR</a>.</li> <li>Search for scholarships in the "Scholarship Search," Career Center, <a href="http://washboard.org">washboard.org</a>, and/or post-secondary websites.</li> <li>Think about how you will pay for your post-secondary education and discuss options with your family about how to save and budget for your education and life after high school.</li> <li>Find out about Dual Credit opportunities at your school where you can earn credit in high school through certain test scores on AP, IB or Cambridge exams or through completion of CTE, College in the High School Courses or Running Start courses.</li> <li>Review your PSAT/SAT results, and organize your test plan for SAT, ACT, SAT Subject Tests and/or AP, IB and Cambridge exams. Mark the dates on your calendar, so you can see the time left, and make a plan to prepare. View your PSAT/SAT scores at <a href="http://studentscores.collegeboard.org">studentscores.collegeboard.org</a>, and send your scores to Khan Academy® for a free, personalized SAT practice plan based on your test results.</li> <li>If you have the College Bound Scholarship, review requirements and repledge your commitment so that you can access your scholarship. More info at <a href="http://readyssetgrad.wa.gov/collegebound">readyssetgrad.wa.gov/collegebound</a>.</li> </ul>
FEBRUARY	<ul style="list-style-type: none"> <li>Prepare for junior year course registration by meeting with your counselor, verifying your transcript is accurate, ensuring you are on track for graduation and considering which courses align with your post-secondary plans and which advanced or stretch course(s) to enroll in. Credit Analysis forms are available in the counseling office, career center or at <a href="http://www.fwps.org/CCR">www.fwps.org/CCR</a>.</li> <li>If you are interested in attending a U.S. Military Academy, request a pre-candidate questionnaire.</li> <li>Enroll in Career &amp; Technical Education classes that fit your career interests. This will allow you to learn more about this career pathway through the course content and projects along with business and industry speakers and tours.</li> <li>As a junior you can take Running Start, PSSC, Career Start, and advanced coursework. Attend required meetings and gather information on various program options and what would be the best fit.</li> <li>If you are interested in playing sports in college, research the National Collegiate Athletic Association (NCAA) eligibility requirements at <a href="http://ncaaclearinghouse.net">ncaaclearinghouse.net</a> to identify qualifying courses at your school.</li> </ul>
MARCH	<ul style="list-style-type: none"> <li>Send emails and contact post-secondary institutions you are considering attending to introduce yourself, explain your interest and ask about ways that you can begin preparing for your future at that campus. Sign on to <a href="http://BigFuture.org">BigFuture.org</a> to discover more planning resources.</li> </ul>
APRIL	<ul style="list-style-type: none"> <li>Create and/or update your "Resume" under the Portfolio Section. Keep track of your academic and extracurricular awards, community services achievements and anything else you participate in.</li> <li>Consider creating a business card to distribute to post-secondary institutions or employers at college and career fairs that includes your name, contact information, interest areas, GPA and/or accomplishments in activities and academics such as being in AP, IB, Cambridge courses and exam results. Be sure to create a professional email address to use when communicating.</li> </ul>
MAY	<ul style="list-style-type: none"> <li>Review and assess your 4 SMART Goals for the year in the Portfolio Section (College Goal, Career Goal, Financial Aid Goal and Academic Goal).</li> </ul>
JUNE	<ul style="list-style-type: none"> <li>Update your hours for community service by logging experience(s) into the Experience Section in the Portfolio.</li> <li>Find a full-time or part-time job, participate in summer camps, summer college programs or volunteer activities.</li> <li>Set up tours and appointments at post-secondary institutions. Call the admissions or information office to set up a personal interview, tour and/or a meeting with a coach or professor. Speak with admissions and financial aid staff or students if school is in session. Send a follow up thank you letter. If summer isn't an option, consider plans during non-school days, early release days or during breaks.</li> </ul>