Marion P Thomas
CHARTER SCHOOL

Eighth Grade Summer Learning Packet

Reading Book List

SUMMER READING IS A WONDERFUL OPPORTUNITY FOR STUDENTS TO CONTINUE THEIR LEARNING JOURNEY OUTSIDE THE CLASSROOM. IT HELPS MAINTAIN AND IMPROVE LITERACY SKILLS, FOSTERS A LOVE FOR BOOKS, AND OPENS UP NEW WORLDS OF IMAGINATION AND KNOWLEDGE. BY EXPLORING VARIOUS GENRES AND TOPICS, STUDENTS CAN BROADEN THEIR HORIZONS AND KEEP THEIR MINDS ACTIVE, ENSURING THEY RETURN TO SCHOOL READY TO SUCCEED.

Rising Kindergarten	**Jabari Jumps by Gala Cornwall**
Rising First Grade	**Just Ask!: Be Different, Be Brave, Be You by Sonia Sotomayor**
Rising Second Grade	**Surf's Up by Kwame Alexander** **The Water Princess by Susan Verde**
Rising Third Grade	**Barack by Jonah Winter** **Ada Twist and the Perilous Pants by Andrea Beaty**
Rising Fourth Grade	**Ellray Jakes is not a Chicken by Sally Warner** **J.D. and the Great Barber Battle by J. Dillard**
Rising Fifth Grade	**ReStart by Gordan Korman** **The Last Kids on Earth by Max Brallier**
Rising Sixth Grade	**The Dreamer by Paul Munoz Ryan** **Becoming Muhammad Ali by James Paterson**
Rising Seventh Grade	**Long Walk to Water by Linda Sue Park** **Esperanza Rising by Pam Munoz Ryan**
Rising Eighth Grade	**One Crazy Summer by Rita Williams Garcia** **We Beat the Street by Sampson Davis, George Jenkns, Rameck Hunt, Sharon Draper**

An Unexpected Trip

by ReadWorks

Sarah wasn't quite sure what was going on. She had been sitting in the back of the car for hours as it rumbled up the highway's six spotless lanes. There were not many other cars. When they turned off the main highway, Sarah wasn't very worried. This was the way to the house her parents had far, far out in the country. She'd been before, for summers. Sometimes she got to bring her friend, Sam. Going to the house by itself did not worry Sarah. The chains rattling around the back seat next to her, though, were a different story.

Sarah's mom and dad had said not to worry and that everything was fine. If everything was fine, though, why had they gotten so upset when the phone had rung last night? This time of month, Sarah usually spent the night with her grandmother, watching old movies and eating popcorn that Grandma made on the stove in a pot (not in the microwave). It was delicious. She couldn't quite make out what her mom had been saying into the phone. Something like, "What do you mean, you can't come, Mom? I need you. No, you don't understand; it has to be tomorrow night!" Later, her mom and dad told her that Grandma wasn't coming, and that she'd have to come on a little car ride with them.

"Can I still have popcorn the way Grandma makes it?" Sarah had asked. Her parents had seemed nervous before, but when she asked this, they'd looked at each other and had a nice, loud laugh, collapsing into a hug.

"We'll see what we can do, ladyface," her dad said, giving her a kiss on the cheek.

Today her parents had woken her up very early in the morning. They'd told her they'd only be gone for a night but let her pack as many toys and movies as she wanted. Sarah was a little confused-normally one night meant two toys and two movies. Her mother was very strict about this, and Sarah had often gotten a stern talking-to when her mother found an extra game or stuffed animal packed in-between her sweaters.

Today, however, there weren't any toy restrictions. There were no restrictions on soda, junk food or TV watching. Her parents didn't seem to be paying much attention to her. They weren't doing much of anything, actually, except staring out the windows as the flat countryside rolled past.

When they made it to the cottage, it seemed strange. It was fall, and what looked beautiful in the summertime seemed odd and spooky now. The friendly green trees had lost their leaves, and now had sharp-looking branches pointing in every direction. In summer, Sarah loved playing in the little barn-shaped garage. Today Sarah couldn't tell what was hiding in its shadows. She hurried out as soon as the car engine shut off.

True to their word, Sarah's parents made her popcorn as soon as they got to the house in the late afternoon. Her mom put one of her favorite movies on the TV, covered her in a blanket and sat in the kitchen. Her father brought things into the house, and then disappeared into the garage for a long time. She heard banging. She could not imagine what was going on. Eventually, she fell asleep.

When she woke up, the sun was setting. Her mom sat in a chair across the room, looking her in the face. It was not usual for Sarah's mom to be there when she woke up, lovingly looking into her eyes. Tonight she seemed nervous.

"Where's Dad?" Sarah asked, rubbing her eyes.

Her mom looked down, and twisted her fingers together. "Your dad ... he has some things he has to do. Alone. We'll see him in the morning." Suddenly, she stood up. "Sarah, it's time for bed."

"Mom! It's not even dark out!"

"Sarah."

"And I'm not tired! I just woke up!"

"Don't argue with me!" Sarah's mom yelled. She hardly ever yelled. Sarah was a little scared. Mom let out a deep sigh. "Sarah, honey, we should go to bed. It's been a long day. I'll lie down with you."

They went to her room, and read books together. Sarah was not tired. They talked and read for a long time. Eventually, Sarah's mom fell asleep. Sarah tossed and turned, burrowing her head into her mom or rolling far across the bed. She decided she needed to walk around a bit. Her legs were crampy. Plus, she *had* had an awful lot of soda to drink. She got up to walk to the bathroom.

The bedroom door opened with a long, low creaking sound. All the lights in the house were off. Sarah could only see because of the big full moon shining through the windows. She put her hands on the wall, feeling her way forward, bumping into tables and tripping on shoes. Just as she got near the bathroom, she realized she could hear a sound. It was like a wailing, crying sound. It was like a dog that was hurt, but also somehow ... different. Mixed in with the howls and yelps were the sounds of the chains rattling. Sarah remembered that sound-the one the chains next to her in the car made every time it hit a bump in the road. What was going on?

She realized the sound was coming from the garage, which connected to the house via a small door. As Sarah crept towards the door, the howling stopped. What was in there? It sounded hurt and afraid. Maybe Sarah could help it?

She eased open the door, which made its own low creak, like a very old ghost waking up in the morning. At first, Sarah saw nothing. Then out of the darkness, a huge shape lunged at her. It was covered in wild, dark fur. It had a huge snout full of long, sharp teeth that snapped and trailed froth. It made the loudest sound Sarah had ever heard as it came at her. Then at the last minute, she heard

the sound of chains, and the animal seemed to snap backwards. Sarah screamed as loud as she could. The thing came at her again and snapped back towards the wall a second time. Then a lot of things happened at once: Sarah heard her mom yell her name. She fell to the floor. Things started to go dark. Just before they did, Sarah noticed something very odd. The thing was wearing a torn up pair of red pants. "Just like my dad's," she thought as she drifted off.

The next morning, Sarah was in bed. Birds chirped. Sun streamed in the window. Had it all been a dream? Sarah stood up and went into the house. Everything looked normal. She smelled bacon and heard it sizzle and pop in the pan. She made her way to the kitchen where her mom was happily frying up eggs and bacon. The waffle maker was out too, sending steam up towards the ceiling. Her dad sat at the table sipping coffee. When he saw her come into the room, he put down the paper he was reading. He motioned for her to come over.

Sarah hesitated a little, and went over and sat. Her dad looked at her kindly. "Hey, ladyface," he said. "Do you know what a werewolf is?"

Name: _____ **Date:** _____

1. Where do Sarah and her parents go?

A. a movie theater

B. a store that has stuffed animals

C. a house in the country

D. the house where Sarah's grandmother lives

2. What is the climax of the action in the story?

A. Sarah's parents make her popcorn.

B. Sarah falls asleep after her mom puts one of her favorite movies on the TV.

C. Sarah's parents let her pack as many toys as she wants.

D. A huge animal leaps at Sarah in the garage.

3. Read the following sentences: "Sarah's mom and dad had said not to worry and that everything was fine. If everything was fine, though, why had they gotten so upset when the phone had rung last night?"

What can be concluded from these sentences?

A. Something may be wrong, but Sarah's parents do not want to talk about it.

B. Last night a stranger called Sarah's home to give her mom and dad some good news.

C. Sarah's mom and dad are cheerful people who never worry about anything.

D. Sarah's mom and dad are worried about how much it will cost to go on a family trip.

4. How does Sarah feel on the trip she takes with her parents?

A. confident and happy

B. confused and scared

C. angry and upset

D. eager and hopeful

5. What is this story mainly about?

A. making popcorn on the stove instead of in the microwave

B. the car in which Sarah and her parents drive to a house in the country

C. the special nights that a girl spends with her grandmother

D. two parents who try to keep a secret from their daughter

6. Read the following sentences: "Going to the house by itself did not worry Sarah. **The chains rattling around the back seat next to her, though, were a different story.**"

What does the author mean by calling the chains in the back seat a different story?

A. The author means that another story has already been written about the chains in the back seat.

B. The author means that the chains worried Sarah.

C. The author means that Sarah worries too much.

D. The author means that Sarah is used to visiting the house in the country.

7. Choose the answer that best completes the sentence below.

Sarah is spending the night with her parents _____ she usually spends it with her grandmother at this time of the month.

A. as a result

B. before

C. although

D. such as

8. What happens after Sarah opens the door to the garage?

9. What does Sarah's dad ask her at the end of the story?

10. Why does Sarah's dad ask her whether she knows what a werewolf is? Support your answer with evidence from the story.

Letters from the Past

by ReadWorks

In the muggy heat of late July in Washington, D.C., it is easy to remember that our nation's capital is built on top of a swamp. The temperature and the humidity battle each other to see which can reach 100 first. Business people suffer through their commutes, red-faced and moist from the heat, dripping with sweat that stubbornly refuses to evaporate. Jamal and Lisa were familiar with the D.C. heat waves. Every summer they came to stay with their grandmother for the month of July. Every summer the heat was miserable. This summer was no exception.

Jamal lay on the screened-in porch, his body draped over a chair. He held a glass of sweet tea to his forehead, trying to absorb some of the cool. It was early afternoon, and his grandmother had lain down for her daily nap. The heat in the middle of the day gave her migraines, and she had learned that sleep was the best escape.

"Jamal! Jamal!" said Lisa, trying to get his attention.

"What?" he asked, irritated at the interruption.

"I'm going to sort out the attic. Want to come?" she asked, unperturbed. Lisa was two years younger than Jamal and was used to being blown off.

"You're crazy," Jamal said. "It's got to be 100 degrees up there, not to mention that it's dusty and full of spiders and who knows what else."

"Grandma said that if we see anything we want up there, we can keep it," said Lisa.

"What makes you think I want any of that old junk?" asked Jamal.

"Suit yourself," said Lisa. She went to the bedroom to change into old clothes that could get covered in sweat, dust, and possibly dead spiders.

Up in the attic, Lisa began to see Jamal's point. The heat in the house rose upwards, only to be trapped in the small attic. Everything was covered in a fine layer of dust, mummified by the passing of time and inattention.

Lisa thought briefly about turning around and heading downstairs, spending the rest of the day lounging on the porch with Jamal. Maybe they would play a game or find a movie on the television. But something pushed her to investigate the attic further. A tingling in her body suggested that in these dusty boxes stacked against the walls something important was waiting for her.

As Lisa began going through the boxes, she realized that no one had touched them for years. The first boxes held memorabilia from her grandparents' youth: old family photographs that had turned yellow around the edges, diplomas from high school and college, even pictures of a pet pig that one of her grandmother's sisters had kept for several years. Lisa came across a picture of a pretty girl with "Maud" written across the bottom. She stared at the photograph. Maud was her grandmother, and it was hard to believe that the wrinkled woman downstairs had been this laughing, vivacious girl.

She sorted through the boxes, labeling them more clearly and throwing out anything that seemed useless. After a couple of hours, Lisa's back ached, and her shirt was drenched.

"Lisa, honey!" she heard her grandmother call. "Come take a break and have some tea."

Lisa went downstairs and took the picture with her. "Grandma, is this really you?"

Her grandmother laughed. "What, you can't believe it? Yes, that's me; that was taken at my homecoming almost sixty years ago."

"You were beautiful, Grandma," said Lisa admiringly.

"You'd be surprised, Lisa," her grandmother responded. "Adults, all of us, were once young and irresponsible like you."

"I don't think Mom was ever like that..." said Lisa. She couldn't imagine her stern, hardworking mother doing anything remotely irresponsible. Her mother held the family together and took care of Lisa and Jamal. But no one would ever call her the life of a party.

"Your mother..." her grandmother's voice trailed off as she carefully chose her words. "When your father died in the service, your mother was still just a girl herself. You were a baby, and Jamal was only two. She had to grow up real fast. She loves you two so much, and that's why she's so strict."

Lisa nodded. She knew her grandmother was right. She just wished that she could see a glimpse of the fun-loving, carefree woman her mother had once been. Lisa finished her tea, thanked her grandmother, and turned to go back upstairs.

"Lisa," her grandmother called, as Lisa climbed the stairs. "There's a box of your parents' things in the corner up there. Maybe it will help you understand better."

Lisa looked through several of the boxes before she found the one her grandmother had mentioned. It was smaller than the others, with "Laura," her mother's name, written on it in cursive. When she opened the box, she found a pack of old letters, tied together with a faded blue ribbon.

Opening the first letter, she skimmed through until she saw the signature: Daryl. These were love letters between her father and her mother. Lisa's father had been in the army when he'd first met her mother, and had written her from every duty station. Lisa read through the letters voraciously. Her mother was witty and charming in the letters, teasing Daryl and citing inside jokes they had. It was a side of her mother that Lisa had never before seen. She was so full of hope, so optimistic about the life that they would have together when he returned.

Lisa took the packet of letters downstairs to the den, where her grandmother was watching TV. She curled up almost in her grandmother's lap, even though she was too old to be doing that anymore. Her grandmother put her arm around Lisa and began to stroke her hair.

"Grandma?" Lisa asked. "Will it be okay with Mom that I read the letters?"

"Oh, honey," said her grandmother. "She was the one who asked me to show them to you."

Name: _____ **Date:** _____

1. Who goes up to the attic in this story?

A. Lisa

B. Lisa and Jamal's grandmother

C. Lisa and Jamal

D. Jamal

2. How does Lisa's perception, or view, of her mother change in the story?

A. Lisa sees that her mother used to be even more stern and strict than she is now.

B. Lisa sees that her mother used to be more easily scared than she is now.

C. Lisa sees that her mother has not always been as stern and strict as she is now.

D. Lisa sees that her mother used to be more athletic than she is now.

3. Read these sentences from the text.

Lisa came across a picture of a pretty girl with 'Maud' written across the bottom. She stared at the photograph. Maud was her grandmother, and it was hard to believe that the wrinkled woman downstairs had been this laughing, vivacious girl.

She sorted through the boxes, labeling them more clearly and throwing out anything that seemed useless. After a couple of hours, Lisa's back ached, and her shirt was drenched.

'Lisa, honey!' she heard her grandmother call. 'Come take a break and have some tea.'

Lisa went downstairs and took the picture with her. "Grandma, is this really you?"

Based on this evidence, how does Lisa probably feel when she sees the photograph of her grandmother?

A. satisfied

B. surprised

C. disturbed

D. lonely

4. The letters Lisa finds in the attic give her "a glimpse of the fun-loving, carefree woman her mother had once been." What evidence from the story supports this statement?

A. "Lisa read through the letters voraciously. Her mother was witty and charming in the letters, teasing Daryl and citing inside jokes they had."

B. "When she opened the box, she found a pack of old letters, tied together with a faded blue ribbon."

C. "Lisa took the packet of letters downstairs to the den, where her grandmother was watching TV. She curled up almost in her grandmother's lap, even though she was too old to be doing that anymore."

D. "Lisa looked through several of the boxes before she found the one her grandmother had mentioned. It was smaller than the others, with 'Laura,' her mother's name, written on it in cursive."

5. What is a theme of this story?

A. People are more likely to tell the truth when they speak than when they write.

B. Your first impression about someone is always right.

C. The best way to learn about the past is to watch movies that were made a long time ago.

D. Learning about the past can change your understanding of the present.

6. Read these sentences from the text.

I don't think Mom was ever like that...' said Lisa. She couldn't imagine her stern, hardworking mother doing anything remotely irresponsible. Her mother held the family together and took care of Lisa and Jamal. But no one would ever call her the life of a party.

'Your mother...' her grandmother's voice trailed off as she carefully chose her words. 'When your father died in the service, your mother was still just a girl herself. You were a baby, and Jamal was only two. She had to grow up real fast. She loves you two so much, and that's why she's so strict.'

What does Lisa's grandmother probably mean when she says that Lisa's mother "had to grow up real fast"?

A. She probably means that Lisa's mother had to drop out of college and start working.

B. She probably means that Lisa's mother had to become carefree and irresponsible very quickly.

C. She probably means that Lisa's mother had to take on more responsibility than she was able to handle.

D. She probably means that Lisa's mother had to become responsible and mature very quickly.

7. Read these sentences from the text.

Opening the first letter, she skimmed through until she saw the signature: Daryl. These were love letters between her father and her mother. Lisa's father had been in the army when he'd first met her mother, and had written her from every duty station. Lisa read through the letters voraciously. Her mother was witty and charming in the letters, teasing Daryl and citing inside jokes they had. It was a side of her mother that Lisa had never before seen. She was so full of hope, so optimistic about the life that they would have together when he returned.

Whom does the pronoun "they" refer to in the last sentence?

A. Lisa and her mother

B. Lisa's mother and grandmother

C. Lisa and her father

D. Lisa's mother and father

8. According to Lisa's grandmother, why is Lisa's mother so strict?

9. What does Lisa learn about her mother from reading her mother's old letters? Support your answer with evidence from the text.

10. Why might Lisa's mother have asked Lisa's grandmother to show her old letters to Lisa? Support your answer with evidence from the text.

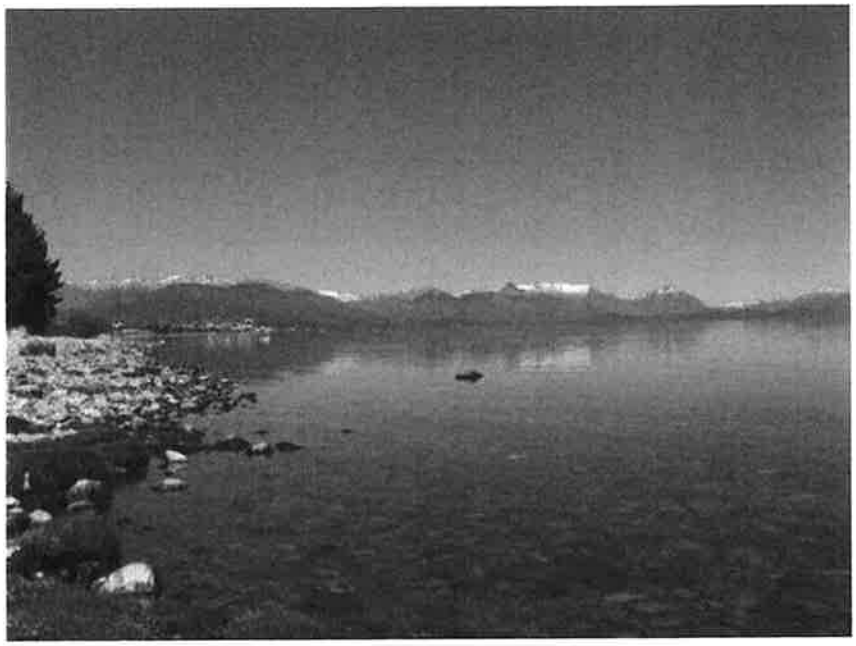
Writing Prompt: Using the narrative writing rubric on a separate sheet of paper, based on the text "Letters from the Past," analyze how Lisa's exploration of the attic and the discovery of old letters impacted her understanding of her family history and relationships. Include specific examples from the text to support your analysis.

Narrative Writing Rubric: "Letters from the Past"

Criteria	4 - Exceeds Standard	3 - Meets Standard	2 - Approaches Standard	1 - Below Standard
Focus and Organization	The narrative has a clear focus on how Lisa's exploration of the attic and discovery of old letters impacted her understanding of her family history and relationships. The narrative is organized in a logical sequence with a clear introduction, body, and conclusion.	The narrative focuses on how Lisa's exploration and discovery impacted her understanding, but the focus may be somewhat unclear or disorganized at times. The introduction, body, and conclusion are present but may lack some cohesion.	The narrative attempts to focus on the impact of Lisa's exploration and discovery, but the focus is unclear or underdeveloped. The organization is somewhat scattered, with an incomplete or unclear introduction, body, or conclusion.	The narrative lacks a clear focus on the impact of Lisa's exploration and discovery. The organization is difficult to follow, with no clear introduction, body, or conclusion.
Use of Details and Examples	The narrative includes numerous specific and relevant details and examples from the text to support the analysis of how Lisa's exploration and discovery impacted her understanding of her family history and relationships.	The narrative includes some specific and relevant details and examples from the text to support the analysis, but more detail could be provided.	The narrative includes few specific or relevant details and examples from the text to support the analysis, or the examples provided do not clearly connect to the impact on Lisa's understanding.	The narrative lacks specific and relevant details and examples from the text to support the analysis of the impact on Lisa's understanding.
Narrative Technique	The narrative effectively uses a variety of narrative techniques, such as dialogue, description, and pacing, to convey the impact of Lisa's exploration and discovery on her understanding of her family history and relationships.	The narrative uses some narrative techniques to convey the impact, but the techniques could be more effectively employed.	The narrative attempts to use narrative techniques, but they are not used effectively to convey the impact on Lisa's understanding.	The narrative lacks the use of narrative techniques to convey the impact on Lisa's understanding.
Language and Conventions	The narrative is written with clear, engaging language and few, if any, errors in grammar, spelling, or punctuation.	The narrative is written with generally clear language and has some errors in grammar, spelling, or punctuation, but they do not significantly interfere with meaning.	The narrative contains several errors in grammar, spelling, or punctuation that somewhat interfere with meaning.	The narrative contains numerous errors in grammar, spelling, or punctuation that significantly interfere with meaning.

Across the Lake

by W.M. Akers



"What do you think's over there?" asked Bart.

"What do you mean?" said Patsy.

"On the other side of the lake. What do you think is over there?"

Patsy and Bart were sister and brother-twelve and eight years old. They were on vacation, but Patsy was bored out of her mind. Ever since Bart was born, their family had been coming to Lake Wenatchee, a crystal blue sheet which stretched as far as the eye could see. Ever since Bart was born, they had stayed in the same cabin, a musty old wreck just steps from where the water met the gritty beach. And ever since Patsy was 10, she had hated coming here.

The mosquitoes got bigger every year. By now they were larger, it seemed, than her fist. The humidity got worse, and the rain became more constant. If this is what people meant by climate change, she thought, she was opposed to it. She spent most of the day reading in bed, stretched out on the scratchy blanket on the rock-hard mattress, wishing she was at home with her friends doing normal summer stuff: going to the mall, watching movies, eating popsicles in the park. She wished she was anywhere but Lake Wenatchee.

But there was nowhere else Bart wanted to be. He didn't mind the humidity, he found the constant rain soothing, and thought the giant mosquitoes were the most amazing animals he had ever seen. He didn't have time for reading on a scratchy blanket because he was in love with the lake. As soon as dawn broke, he was on its shore-building gritty sand castles from the gritty sand. He imitated the birds, trying to get their attention. He crept up on geckos, hoping they would want to play. He threw rocks in the water doing everything he could to entertain the fish. Bart loved nature-even if the towering mosquito bites that dotted his arms and legs were proof that nature didn't love him back.

"I bet the other side of the lake is even better than this side," he said.

Trying to act interested, Patsy said, "What makes you say that?"

"It's tough to believe, I know, because this side is so unbelievably super perfect. There are birds and lizards and mosquitoes and fish. But something in my gut tells me that it's even better over there."

The summer before, Patsy and her mother had driven to the other side of the lake to buy shampoo at the drugstore. The other side of the lake was nothing too exciting: strip malls and gas stations, with a shopping mall in the middle. But before she told Bart the truth, she wanted to know what he was imagining. It would be more fun to burst his bubble that way.

"Describe it to me," she said. "Tell me everything that's on the other side of the lake."

"Fish, obviously. But much bigger ones, I bet. The kind we saw at the natural history museum last year-like the super-underwater kind that have the little lamp hanging in front of their eyes. I bet there's a whole bunch of those. And birds, too-obviously-but great big huge ones. Not just seagulls and stuff-falcons, hawks, and snowy owls."

"And bald eagles, too, I bet."

"Tons of them."

"Do you know what they call a group of eagles?"

"I don't know...a flock?"

"A convocation."

"No way."

"It's true! I learned it in science class last year."

"So if I went to the other side of the lake, I'd see a convocation of eagles?"

"And I bet that's not all you'd see. What else?"

"Uh...I don't know." Bart tossed a rock into the lake and watched the ripples drift slowly to the dock. He was appearing to lose interest.

"Come on, Bart! Let your imagination run wild. Anything in the world could be over there. So what do you want to see?"

"Well, uh...an ice cream store."

"What *kind* of ice cream store? The best one in the world?"

"Definitely."

"What makes it the best one in the world?"

"Well, uh-all the ice cream costs 25 cents. And if you ask for a free sample, they give you a whole scoop. And they have all kinds of crazy flavors, like butternut peanut butter walnut, and triple chocolate marshmallow fluff surprise."

"Triple chocolate marshmallow fluff surprise? What's the surprise?"

"More marshmallow."

Patsy felt her stomach give a rumble. "Huh. That actually sounds really good."

"Of course. And next to the ice cream store is a roller coaster park."

"And all the roller coasters are free?"

"Yep. And each one has a double loop-the-loop."

"You'd better ride that before you go to the ice cream store, not after."

"Good point." Bart trailed off again, distracted by a snail. Patsy found herself strangely impatient. She wanted to know what else was on the other side of the lake.

"Is there anything that I will like?"

"You like ice cream."

"Yeah, but what else?"

"Uh, I don't know. I guess there's probably a movie theater and stuff."

"But I can see movies at home. What's over there that's special?"

"There's a clothing store where they give you five free outfits, just for coming in the door. And all the clothes fit you perfectly, and the sales ladies are never mean to us, just because we're kids."

"Oh man, that sounds great."

"Yeah! And..." Bart tried to remember what else his sister liked. "There's a place where you can get free notebooks for school!"

"Really?"

"The really expensive kind, with the heavy paper and colorful covers and stuff. And you can have all the fancy pens you want!"

"That does sound nice..."

"Wait a minute! Didn't you and Mom go over there last year? To buy shampoo or something?"

"Yeah."

"Well, what was it like?"

Patsy remembered the strip malls and gas stations-a lake of concrete, where the humidity was unbearable and the mosquitoes, somehow, even bigger-and she looked at her brother's hopeful, dreaming face.

"It was exactly like what you said," she said. "Free ice cream and roller coasters and everything. Exactly like that."

Name: _____ **Date:** _____

1. How does Patsy feel about Lake Wenatchee?

A. She loves it.

B. She hates it.

C. She enjoys it.

D. She's scared of it.

2. How does Patsy change in the story?

A. At first she wants to go home, but then she doesn't want to leave.

B. At first she wants to stay at the lake, but then she wants to leave.

C. At first she wants to upset her brother, but then she changes her mind.

D. At first she lies to her brother, but then she tells him the truth.

3. Bart has unrealistic ideas about what the other side of the lake is like. What evidence from the passage best supports this conclusion?

A. Bart thinks that the other side of the lake is even better than this side.

B. Bart loves the lake, and is up playing on the shore at the crack of dawn every day.

C. Bart imitates the birds, creeps up on geckos, and throws rocks for the fish.

D. Bart thinks the other side of the lake has snowy owls and a roller coaster park.

4. Read the following sentences: "The mosquitoes got bigger every year. By now they were larger, it seemed, than her fist." Based on this information, what can you conclude about Patsy?

A. Patsy thinks the negative aspects of the lake are not as bad as they actually are.

B. Patsy thinks the negative aspects of the lake are worse than they actually are.

C. Patsy is interested in animals, insects, and nature.

D. Patsy is scared that the mosquitoes will get bigger.

5. What is this passage mostly about?

A. Patsy tells Bart that the other side of the lake is not exciting.

B. Bart enjoys being on vacation at Lake Wenatchee.

C. Patsy wishes she were at home with her friends.

D. Bart imagines what is on the other side of the lake.

6. Read the following sentences: "'But something in my gut tells me that it's even better over there.' ... The other side of the lake was nothing too exciting: strip malls and gas stations, with a shopping mall in the middle. But before she told Bart the truth, she wanted to know what he was imagining. It would be more fun to **burst his bubble** that way."

As used in this sentence, what does the phrase "**burst his bubble**" mean?

A. lie to him

B. make something up

C. destroy his fantasy

D. tell the truth

7. Choose the answer that best completes the sentence below.

Bart thinks that the other side of the lake is exciting and magical, _____ Patsy knows that it is really unexciting.

A. but

B. so

C. for example

D. after

8. Where has Patsy's family gone on vacation since Bart was born?

_____

_____

_____

9. Describe what Bart says is on the other side of the lake when Patsy asks, "Is there anything that I will like?"

10. Explain why Patsy may have decided not to burst her brother's bubble and tell him about the reality of the other side of the lake at the end of the story. Use evidence from the story to support your answer.

Genetic Basis of Butterflies

by ReadWorks

If you've ever been in a park during the summer, you may have seen butterflies flitting from flower to flower. They are quite beautiful, and like humans, seem to have individual traits. There are orange butterflies with big brown eyes, blue butterflies with black markings on their wings, and white butterflies with small black antennae. According to some butterfly experts, there are approximately 20,000 kinds of butterflies in the world. Each species (or type) of butterfly has its own genetic information that dictates what characteristics it will have and distinguishes it from other butterflies.

Inherited genetic information explains why certain species look different from others. Monarch butterflies, orange butterflies with black markings and white spots on their wings, are most common in Mexico and the United States. Their bright color makes them easily noticeable to predators, but also acts as a warning that they are poisonous if eaten.

The poison of monarch butterflies can be traced back to a plant they feed on during an earlier stage in their lives. What we think of as butterflies are the adult versions of caterpillars. As caterpillars, monarchs feed on milkweed, which contains a toxin that is poisonous to most vertebrates but not to monarch caterpillars. When the caterpillars become adult monarch butterflies, the milkweed in their bodies is poisonous to any predators that might try to eat them.

An unsuspecting predator that did not know the monarch butterfly was poisonous would soon realize its mistake. After tasting the poisonous bug, most predators quickly spit out the monarch and learn not to eat them again. Unlike other butterflies, whose genetic information (and therefore their coloration) helps them blend into their habitats in order to defend themselves from predators, monarch butterflies rely on their bright coloration to keep them safe. An interesting fact: another species of butterfly, the viceroy, mimics the coloration of the monarch in order to keep predators from

eating it!

Even though there are many kinds of butterflies that look very different, all butterflies share a certain number of traits, which are also determined by their genetic information. They all have the same life cycle. First a caterpillar hatches from an egg. The caterpillar eats plants and grows bigger. Then it covers itself in a hard case called a chrysalis, and it enters a stage of transformation. During this stage, the insect is called a *pupa*. Inside the chrysalis, the pupa grows the legs, wings, and other parts of an adult butterfly. Once the butterfly is fully developed, the chrysalis splits apart, and the butterfly emerges. All butterflies have four wings-two upper, two lower-that are covered in tiny colored scales. A butterfly's genes determine the color of its scales, and more-they dictate the insect's size and shape as well.

Colorful decorations are key to the survival of the monarch butterfly. Vivid colors signal danger to the predators which might otherwise eat the butterfly. Other species of butterfly, with different genes, rely on different survival strategies, and have their own distinctive designs. But no matter the pattern, the blueprints for each of the 20,000 different species' development are written in their genetic codes.

Name: _____ **Date:** _____

1. What does genetic information dictate, or control?

A. what characteristics an organism will have

B. where an organism will live and die

C. which predators will eat the organism

D. who the organism's parents were

2. The passage describes the sequence of a butterfly's life. Which of the following shows the life cycle of a butterfly in the correct order?

A. egg, pupa, adult, caterpillar

B. pupa, egg, caterpillar, adult

C. egg, caterpillar, pupa, adult

D. egg, pupa, caterpillar, adult

3. Monarch butterflies are protected by their bright coloration. What evidence from the passage supports this conclusion?

A. Their bright coloration makes monarch butterflies easily noticeable to predators.

B. The monarch's color warns predators that they are poisonous, so they don't get eaten.

C. Unlike other butterflies, monarchs do not blend into their surroundings to protect themselves.

D. If a predator eats a monarch, it can taste the poison and will spit the butterfly out.

4. Butterfly A is blue with black markings. Butterfly B is green with brown spots. What conclusion can you make about these two butterflies?

A. Both butterflies protect themselves by blending into their surroundings.

B. The two butterflies have different life cycles.

C. Both butterflies have the same genetic information.

D. The two butterflies have different genetic information.

5. What is this passage mostly about?

A. monarch butterflies

B. viceroy butterflies

C. milkweed toxins

D. caterpillars and pupae

6. Read the following sentences: "Inside the chrysalis, the pupa grows the legs, wings, and other parts of an adult butterfly. Once the butterfly is fully **developed**, the chrysalis splits apart, and the butterfly emerges."

What does the word "**developed**" mean?

A. young and small

B. changed and grown

C. safe and protected

D. soft and vulnerable

7. Choose the answer that best completes the sentence below.

Monarch butterflies are brightly colored; _____, they are highly visible to predators.

A. however

B. for example

C. as a result

D. initially

8. Why are monarch butterflies poisonous?

_____

_____

_____

9. How do predators know that monarch butterflies are poisonous?

10. How does the monarch's coloration help both the butterfly and predators?

Writing Prompt: Using the informational writing rubric on a separate sheet of paper, after reading the passage about butterflies, explain how the genetic information of butterflies impacts their physical characteristics and survival strategies. Use evidence from the text to support your analysis.

Informational Essay Rubric: Genetic Basis of Butterflies

Criteria	4 - Exceeds Standard	3 - Meets Standard	2 - Approaches Standard	1 - Below Standard
Thesis and Focus	The thesis statement clearly explains how the genetic information of butterflies impacts their physical characteristics and survival strategies. The essay maintains a consistent focus on this central idea throughout.	The thesis statement addresses how genetic information influences butterflies, but may lack clarity or specificity. The essay generally stays focused on this topic.	The thesis statement is unclear or only partially addresses the relationship between genetics and butterfly traits/survival. The essay sometimes strays from the main topic.	There is no clear thesis statement, or the thesis does not address the assigned topic. The essay lacks focus and jumps between unrelated ideas.
Use of Evidence	The essay includes multiple relevant and detailed examples from the text to support the analysis of how butterfly genetics impact their physical features and survival. Evidence is well-integrated and clearly explains the connections.	The essay includes some appropriate examples from the text to support the analysis, but the connections between genetics and butterfly traits/survival could be stronger or more developed.	The essay includes limited or loosely connected evidence from the text. The link between the examples and the analysis of genetics is unclear.	The essay lacks sufficient evidence from the text, or the evidence provided does not support the analysis of how butterfly genetics influence their characteristics and survival.
Analysis and Explanation	The essay provides an insightful, in-depth analysis of how specific genetic information leads to the observed physical characteristics and survival strategies of butterflies. The explanations demonstrate a sophisticated understanding of the topic.	The essay explains how butterfly genetics relate to their physical traits and survival, but the analysis could be more detailed or nuanced.	The essay attempts to analyze the connection between butterfly genetics and their characteristics/survival, but the explanations are underdeveloped or contain inaccuracies.	The essay fails to analyze or explain how the genetic basis of butterflies impacts their physical features and survival strategies, or the explanations are significantly flawed.
Organization and Clarity	The essay is clearly organized with an effective introduction, body paragraphs that logically build upon each other, and a concluding paragraph that reinforces the central idea. The writing is easy to follow and conveys information in a coherent manner.	The essay has a clear organizational structure, but the transitions between ideas or paragraphs could be stronger. The writing is generally clear, but there may be some areas that are harder to follow.	The essay shows some attempt at organization, but the structure is inconsistent or confusing in parts. The writing is sometimes unclear or difficult to follow.	The essay lacks a clear organizational structure. The writing is disjointed and difficult to understand, with unclear transitions and relationships between ideas.

Math Facts Challenge

FOR THE SUMMER, ALL INCOMING K-8 STUDENTS MUST PRACTICE THEIR BASIC MATH FACTS LISTED BELOW AND COMPLETE THE MATH ACTIVITIES FOR THEIR GRADE LEVEL. THE GOAL IS TO BE 100% FLUENT IN THEIR FACTS WHEN THEY RETURN TO SCHOOL.

Rising Kindergarten	• Orally Count to 50 • Count Objects up to 20
Rising First Grade	• Count by 1s, 2s, 5s, & 10s to 100 • Addition & Subtraction within 20 Ex: 6+2=8 9-4=5 11+5=16 15-3=12 20-7=13
Rising Second Grade	• Count to 120, starting at any number • Addition & Subtraction within 50 Ex: 25+10=35 50-10=40 40+5=45 30-20=10
Rising Third Grade	• Addition & Subtraction within 100 Ex: 60+30=90 100-40=60 • Multiplication Facts - 0 to 10 • Fractions and Equivalent Fractions
Rising Fourth Grade	• Addition & Subtraction within 1000 Ex: 250+300=550 900-100=800 • Multiplication and Division Facts - 0 to 12 • Fractions and Equivalent Fraction
Rising Fifth Grade	• Addition & Subtraction of any multidigit number Ex: 20000+3000=23000 19500-1400=18100 • Multiplication and Division Facts - 0 to 12 • Fractions and Equivalent Fraction
Rising Sixth Grade	• Multiplication and Division Facts - 0 to 12 • Fractions and Decimal Fluency
Rising Seventh Grade	Multiplication and Division Facts - 0 to 12 Fractions, Decimal, and Percent Fluency Solve Simple Expressions and Equations

Decimal Operations

1. $9.372 + 3.029$

2. $11.322 - 3.825$

3. $18.23 - 5.409 + 2.55$

4. $2.35 * 7.11$

5. $1.023 * 3.5$

6. $23.25 \div 0.7$

7. $0.54723 \div 2$

8. $8.752 \div 0.12$

For #9-12 simplify the fraction by finding common factors & eliminating them.

9. $\frac{4}{10}$

10. $\frac{24}{40}$

11. $\frac{81}{27}$

12. $\frac{9}{21}$

For #13-16, simplify each answer as much as possible by cross cancelling factors.

13. $\frac{4}{5} * \frac{10}{18}$

14. $\frac{8}{9} * \frac{3}{4} * \frac{10}{6} * \frac{12}{15}$

15. $\frac{27}{38} \div \frac{3}{7}$

16. $\frac{35}{38} \div \frac{5}{19}$

Order of Operations

Simplify each expression using PEMDAS!

1) $2 * 6 \div 4 + 7 - 8 * 3 + 77 \div 11$

2) $72 \div 12 + 2^2 - 5 * 2 + 3 + 2 * (6 - 5)$

3) $7 * (12 - 5) + 9 \div (-3) + 7 * (-2)$

4) $13 + 2x - 5 - 8x + 7 * (4x + 1)$

5) $-5x - 8 + (8 \div 2) + 7 * 6$

6) $3x - 6 + 4 * 8 - 3x + 2y - 90 \div 5$

Absolute Values & Negative Integer Operations

Simplify each statement as much as possible.

1. $|-4|$
2. $-|-5|$
3. $(-3)^2$
4. -5^3
5. $-4 * 5$
6. $-7 + 3$
7. $-8 * -7$
8. $-28 \div -7$
9. $-42 + 27$
10. $-22 - (-8)$
11. $\frac{-42}{7}$
12. $37 - 83$
13. $-42 \div 2 + (7 * 3) + 8 - (-5) - 4 * 2$
14. $|-2| + 8^2 - (-3)^2 + 7 * 2 - 22 \div 2$
15. $|-4^3| - 8 * 7 + (-(-(-2) + \left(-\frac{48}{6}\right) + (-3) * (-2)$

Operations with Fractions

Reduce answers as much possible by finding common factors.

#1. $\frac{2}{5}+\frac{3}{7}$

#2. $\frac{4}{28}-\frac{7}{9}$

#3. $3\frac{1}{3}+4\frac{7}{8}$

#4. $-\frac{7}{25}-\frac{8}{15}$

#5. $\frac{2}{25}*\frac{15}{22}$

#6. $\frac{27}{31}*-\frac{62}{81}$

#7. $-\frac{10}{21}*-\frac{49}{35}$

#8. $4\frac{1}{3}*5\frac{2}{5}$

#9. $-\frac{42}{55}\div\frac{28}{11}$

#10. $\frac{25}{28}\div\frac{15}{32}$

#11. $-\frac{8}{5}\div\frac{6}{35}$

#12. $\frac{125}{128}\div\frac{65}{72}$

13. You have $8\frac{4}{5}$ total cups of lemonade, and you want to share it with your friends. Each friend gets $\frac{1}{10}$ of a cup to drink.
How many friends do you have?

14. You have $10\frac{2}{7}$ ounces of candle wax to make an army of tiny, beautiful-smelling candles. You are able to make a total of 12 candles from the wax. How much wax is in each candle? (Hint: write an equation first.)

Exponents & Expressions

For #1-4, rewrite as multiplication problems, then solve.

#1. $(-5)^4$ #2. $\left(\frac{1}{2}\right)^3$ #3. -4^2 #4. $\left(-\frac{2}{3}\right)^3$

For #5-7, rewrite as exponents, and solve.

#5. $2 * 2 * 2$ #6. $(\frac{1}{4} * \frac{1}{4})$ #7. $-1 * -1 * -1 * -1 * -1 * -1 * -1$

Simplify the expression by combining terms.

#8. $-2(x-3)+4x$ #9. $4x-1(6+2x)$ #10. $4x-3+6z+7-10x$

#11. $(6a+3x)-(4a-7x)$ #12. $(-4y-8x)+(7y+10x)$

#13. $(5x-2a)-(-4x+7a)$ #14. $(15x-3y)+(-12x-y)$

Find the greatest common factor of the following terms.

#15. 84, 128 #16. $147x$, $105x^2$ #17. 216, 288, 72

Solving Equations

Solve each equation for the variable.

#1. $2x + 6 = 8$

#2. $-4(x - 2) = 16$

#3. $\frac{x+7}{3} = 12$

#4. $\frac{5x-3}{2} = 11$

#5. $-3x - 7 = x + 9$

#6. $4(2x + 6) = 16x + 8$

#7. $2(x - 4) = 22$

#8. $-5x = 35$

#9. $\frac{x}{4} + 3 = 7$

#10. $-\frac{2x}{5} = 10$

#11. $-\frac{x-5}{2} = 11$

#12. $\frac{2x+1}{2} = 3x$

Factor out any common factors from each expression.

#13. $81x + 27$

#14. $3x - 9$

#15 $-48 - 64x$

Inequalities

For #1-2, write a sentence that represents the inequality.

#1. $x < 7$ **#2.** $x \geq -4$

For #3-4, tell if the given number makes the inequality TRUE or FALSE.

#3. $2x < 10, \text{value} = -3$ **#4.** $\frac{x+7}{6} \geq -5, value = 5$

Solve the inequalities, showing each step. Then graph the solutions.

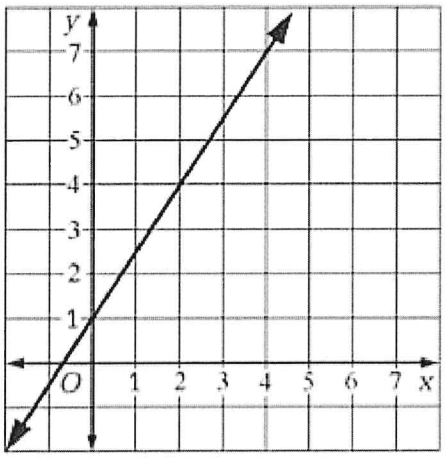
#5. $x + 7 \leq -2$ **#6.** $\frac{3}{5}x > 9$ **#7.** $7 - 2x \geq 5$

#8. $-x - 8 < 3$ **#9.** $-\frac{5}{6}x \geq 15$ **#10.** $2x - 5 > 3x + 6$

#11. $3x - 8 < 3x + 7$ **#12.** $3x + 7 > 4$ **#13.** $-2x + 7 < 9x - 2$

Coordinate Plane & Unit Rates

For #1-3, use the graph given to answer the questions.



#1. When $x = -2$, what is Y?

#2. When $y = 4$, what is X?

#3. When $x = 4$, what is Y?

For #4-6, use the equation $y = -3x + 2$ to find the value of y at the given x values.

#4. $x = 3$ **#5.** $x = -\frac{5}{3}$ **#6.** $x = 0$ **#7.** $x = -4$

For #7-10, write the ratio as a fraction in its <u>simplest</u> form (reduce!).

#8. 56 to 77 **#9.** 144 to 84 **#10.** 15 to 45 **#11.** 36 : 108

Find the unit rate [by making the denominator 1].

#12. $\frac{28\ megabytes}{5\ seconds}$ **#13.** $\frac{45\ cups\ of\ coffee}{4\ days}$ **#14.** $\frac{28\ detentions}{9\ days}$

Proportions & Slope

For #1-3, tell if the statements are proportional. Show your work.

1. $\frac{3}{7} = \frac{81}{189}$

2. $\frac{22}{8} = \frac{152}{56}$

3. $\frac{5}{6} = \frac{70}{82}$

For #4-6, write a proportion for the situation, and then solve.

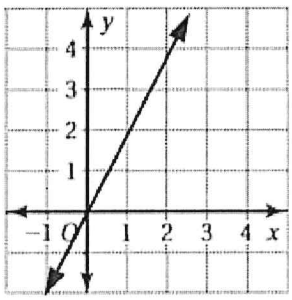
4. A test is worth 36 total points and you want to get an 87% on it. How many points do you need to score?

5. You pay $4 for 7 pounds of chocolate frogs. How much would you pay for 11 pounds of chocolate frogs?

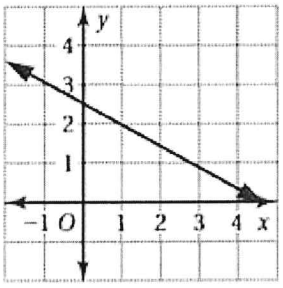
6. The ratio of chocolate to vanilla ice cream is 3 scoops to 7 scoops. If there are 147 scoops of vanilla ice cream, how many total scoops are there?

For #7-8, find the slopes of the graphs provided.

7.



8.



For #9-11, use the points given to find the slope between them. (Answers might be fractions!)

9. $(-3, 4)$ *and* $(-1, -2)$

10. $(7, 9)$ *and* $(2, -1)$

11. $(-21, 9)$ *and* $(19, -4)$

Decimals, Fractions, Percents

1. Write 0.42 as a fraction.

2. Write $\frac{7}{35}$ as a decimal.

3. Write 74% as a fraction.

4. Write 0.5732 as a percent.

5. Write $\frac{3}{11}$ as a percent.

6. Write $\frac{6}{25}$ as a percent.

For #7-12, turn the sentences into equations, and solve.

7. What number is 37% of 7?

8. 22% of 45 is what number?

9. 7 is 37% of what number?

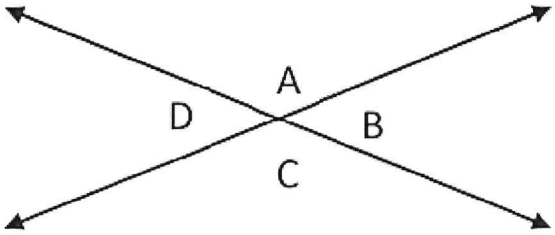
10. What is 212% of 3?

11. 0.15% of 3,034 is what number?

12. 6 is 8% of what number?

13. A company makes a table for $15 and sells it for $19. What is the percentage of markup?

ANGLES



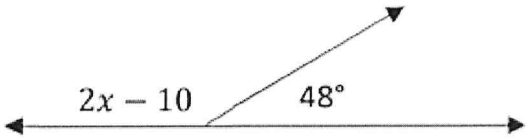
1. List the pairs of adjacent angles.
2. List the pairs of vertical (opposite) angles.

3. Angle Z and Angle X on intersecting lines are vertical angles. If Angle Z is 63°, what is Angle X?

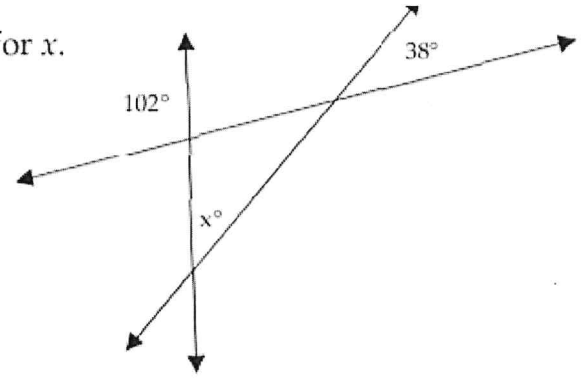
4. Angle K and Angle J on intersecting lines are adjacent angles. If Angle K is 105°, what is angle J?

5. The total sum of **complementary** angles is _____.
6. The total sum of **supplementary** angles is _____.
7. Angle B and Angle C are **complementary**. If Angle B is 43°, what is Angle C?

8. Solve for x.



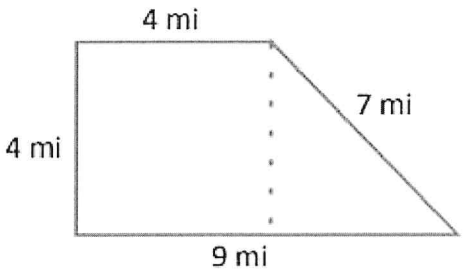
9. Solve for x.



Area, Perimeter, and Circumference

1. A circle has a radius of 3 inches. A) What is the diameter? B) What is the area of the circle? C) What is the circumference of the circle?

2. A circle has a diameter of 8 meters. A) What is the radius? B) What is the area of the circle? C) What is the circumference of the circle?



3. What is the perimeter of the figure to the right?

4. What is the area of the figure to the right?

5. What is the area of a parallelogram with a base of **9 inches** and a height of 7.62 **centimeters?**

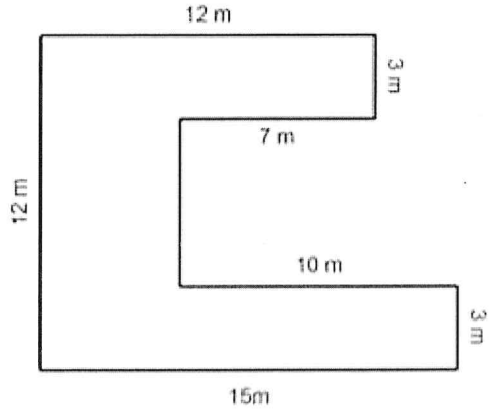
6. The area of a rectangle is 58 in^2. The base is 8 inches long. What is the height?

7. A circle has a circumference of 14π inches. What is the diameter of the circle?

8. A triangle has an area of 160 mi^2, and a base of 20 miles. What is the height?

9. What is the area of a triangle that has a base of 8 meters and a height of 7 meters?

10. A circle has an area of $49\pi\ m^2$. What is the radius of the circle?

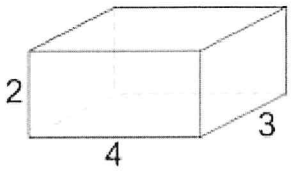


11. Find the perimeter of the shape to the left.

12. Find the area of the shape to the left.

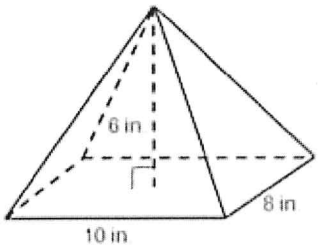
Surface Area and Volume

1. A giant lobster tank is a **cylinder**. The base has a radius of 3 miles. It is 10 miles tall.
A) What is the area of the base? B) What is the tank's volume? C) What is the surface area?

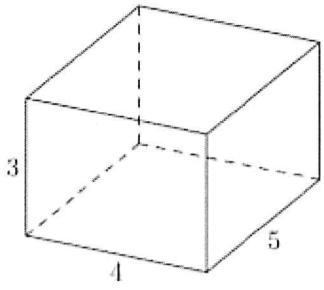


2. The shape to the left is measured in millimeters.
A) What is the area of the base? B) Volume? C) Surface area?

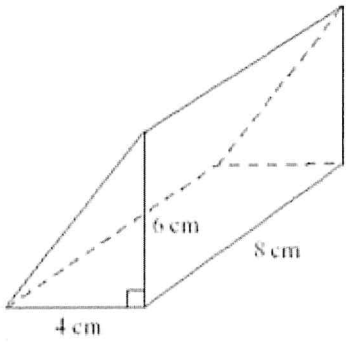
3. Find the volume.



4. Find the volume.



5. Find the volume.



6. A cylinder has a volume of $80\pi\ in^2$. The radius is 4 inches! What is the cylinder's height?

7. A right **rectangular** prism has a surface area of 180 m^2. The perimeter of the base is 28 meters. The width of the base is 6 m and the length of the base is 8 m. What is the height of the prism?

Probability

List A) the amount of <u>events</u> in each experiment, and B) the total amount of outcomes.

1. Rolling a 6-sided die 3 times
2. Flipping a coin 4 times
3. Filling 3 different positions with 7 different people
4. Making one meal from 3 appetizers, 5 main courses, 4 desserts, and 3 drinks

For 5-6, find the <u>theoretical</u> probability of the event.

5. Rolling two six-sided dice and getting a total of 7
6. Flipping 3 two-sided coins and getting two heads and a tail

7. You have a bag of lizards. There are 3 green lizards, 5 red lizards, 4 orange lizards, 6 white lizards, and 2 black lizards.

A) What is the theoretical probability of drawing a green lizard?

B) What is the theoretical probability of drawing an orange OR a white lizard?

8. You reach into the bag and draw 10 lizards, replacing them every time. You draw 4 red lizards, 2 white lizards, and 4 green lizards.

A) What is the **experimental** probability of drawing a green lizard?

B) Which is bigger, the theoretical or experimental probability of drawing a green lizard?

9. You're making cookies for a bake sale. The probability of frosting a good cookie is $\frac{3}{7}$. You frost 812 cookies. How many good cookies do you manage to frost?

10. You're harvesting Brussel sprouts. The chance of finding a yummy Brussel sprout is $\frac{2}{27}$. If you find 48 yummy Brussel sprouts, what is the total amount of Brussel sprouts?

Science & STEM

THIS SUMMER, GET READY FOR STEM BY COMPLETING AS MANY BOXES ON THE CHOICE BOARD AS YOU CAN! BELOW IS AN OVERVIEW OF THE SCIENCE CONCEPTS YOU WILL LEARN ABOUT NEXT YEAR!NRES AND TOPICS, STUDENTS CAN BROADEN THEIR HORIZONS AND KEEP THEIR MINDS ACTIVE, ENSURING THEY RETURN TO SCHOOL READY TO SUCCEED.

Rising Kindergarten	**Living Things** **Our Changing World** **Weather & the Sun** **Make Things Move**
Rising First Grade	**All About Plants** **Animals & How TheyCommunicate** **Light & Shadows** **Sky Patterns**
Rising Second Grade	**Land & Water** **Properties of Materials** **Earth's Changing Landscape** **Living Things & Habitats**
Rising Third Grade	Forces Around Us Life Cycles & Traits Different Environments Observing Weather
Rising Fourth Grade	**Informaion Processing & Living Things** **Forces & Energy** **Using Energy** **Our Dynamic Earth**
Rising Fifth Grade	**Investigate Matter** **Ecosystems** **Earth's Interactive Systems** **Earth & Space Patterns**
Rising Sixth Grade	**Cells & Life** **Body Systems** **Reproduction of Organisms** **Energy & Matter** **The Water Cycle**
Rising Seventh Grade	**Classification & States of Matter** **Properties & Changes** **Dynamic Earth** **Natural Hazards** **Materials Science** **Distribution of Earth's Resources**
Rising Eighth Grade	**Geologic Time** **Natural Selection & Adaptations** **Forces & Motion** **Evidence of Evolution** **Mechanical Energy** **Electromagnetic Forces** **Light** **Introduction to Waves** **Information Technologies**

DC Science Assessment Grade 8 Practice Test (Question 4 of 6)

Q 4

Marcus, Anna and Makayla also participated in the paper airplane challenge. In this challenge, teams are required to design and construct a paper airplane that can travel at least 3 meters and stay in the air as long as possible. The airplanes must:

1. Have a tail.
2. Be constructed of a standard-size sheet of paper.
3. Be easily seen when it flies and lands.
4. Be built within 30 minutes.

The teams learned that engineers always think about criteria and constraints when designing solutions to solve a problem:

1. Criteria are requirements for a successful solution. Criteria identify the functions that a design is expected to perform. For example, criteria for building an automobile might include that the auto must hold up to four passengers and cannot cost more than $7,500.
2. A constraint is a limitation that must be taken into account when designing the solution. For example, the materials for the automobile must meet minimum safety standards and weigh less than 4,500 pounds.

Marcus, Anna and Makayla made a list of criteria and constraints and listed them in the table below.

Drag and drop the characteristics in the table below, placing them in either criteria, constraints or neither:

1.Made from a single sheet of standard sized paper

2. Length of the plane

3. Width of the plane

4. Easily seen when flies and lands

5. Made within 30 minutes

6. Has a tail

7. Travels at least 3 meters

8. Has turned-up wings

9. Has a sharp nose

Table heading

Criteria	Constraints	Neither
×	×	×
×	×	×
×	×	
×		

STEM Enrichment Activity Chart Grades 6-8

Create Monday	Science Tuesday	Coding/Active Wednesday	Engineering Thursday	Fun Friday
Spread some joy by making a greeting card with 3D popup art for a neighbor or relative!  SCAN ME	Did you know that different liquids can have different densities? Try to create a density tower using liquids you have at home! SCAN ME	Create a book on storyjumper.com  SCAN ME	Explore the various engineering career fields that exist. Take the quiz below to find out what type may interest you! SCAN ME Play a game at engineering.com!	Which is the best invisible ink? Write 3 messages using milk, lemon juice, & vinegar. Allow to dry. Heat up the paper with a blow dryer to see the message appear! SCAN ME
It's your turn to create a mosaic. You can use pieces of paper, cardboard, plastic beads, bottle caps, etc.  SCAN ME!	Most of us drink too much sugar each day. Look at the nutrition labels of your drinks and create a chart of least to most grams of sugar per serving. Play the Blood Sugar Balance Game  SCAN ME!	Explore the world of computer science with engaging videos, self-paced tutorials, programming activities, and more! CODE SCAN ME	Take a virtual field trip to Johnson Space Center in Houston, TX. What was the most surprising thing you learned about space exploration? Scan me Virtual Field Trip Play Space Games at spaceplace.nasa.gov SCAN ME	Watch "Introduction to Simple Circuits"  SCAN ME Practice re-wiring circuits SCAN ME
Research different STEM careers and choose one. Put together some interesting information and pictures to create a slideshow of what you've learned. SCAN ME	Choose an online article related to a science topic you learned this year. What is something new you learned?  SCAN ME	Check out the projects at scratch.mit.edu then create your own game!  SCAN ME	Create an account on Storyboardthat through google and then create a story. Save your comic! https://www.storyboardthat.com/storyboard-creator  SCAN ME	Compile a cheerful playlist for when you need to lift your mood. Your playlist must have a minimum of 10 songs. Give your playlist a name, describe the overall vibe of your playlist and explain why you selected these specific songs.