

To earn your full participation point for the Do Now be sure to have completed all of the following by the time is up:

- 1) Be in your seat
- 2) Take out your calculator
- 3) Have last night's homework out
- 4) Complete the do now



Name: _____ Algebra 9 Unit 1 Lesson 1

Rates and Patterns

DO NOW ~ Wednesday 9/4

What was your favorite part about summer break? _____



Classwork

If there are 12 eggs per carton, then how many eggs do we have in 5 cartons?

$$12 \text{ eggs} \cdot 5 =$$

$$\boxed{60 \text{ eggs}}$$

If a pizza contains 8 slices and there are 4 people eating, how many slices are there per person?

$$\frac{8 \text{ slices}}{4 \text{ ppl}}$$

$$\boxed{2 \text{ slices/person}}$$

In August, Justin did yard work for a total of 32 hours. For all the hours Justin worked, he earned \$256. How much money did Justin make per hour doing yard work?

$$\frac{\$256}{32 \text{ hr.}}$$

$$\boxed{\$8/\text{hr}}$$

DO NOW ~ Thursday 9/5

A child bought 4 bags of rubber bands to make into bracelets. If there are 80 rubber bands per bag, how many total rubber bands did he buy?

$$4 \cdot 80 = 320 \text{ Rubber Bands}$$



Classwork

If a car is traveling at 65 miles per hour, then how far does it travel in 2 hours?

$$\frac{65 \text{ miles}}{1 \text{ hr.}} \cdot \frac{2 \text{ hr}}{1}$$

$$130 \text{ miles}$$

If a biker travels 20 miles in one hour, how many minutes does it take per mile traveled?

$$20 \text{ mi} \rightarrow 60 \text{ min.}$$

$$\frac{60}{20} =$$

$$3 \text{ minutes}$$

Which is the "better" buy? A package of paper with 200 pages being sold for \$3.50, or a larger ream of 500 pages being sold for \$8.00? Explain.

$$200 \text{ pages} \rightarrow \$3.50$$

$$500 \text{ pages} \rightarrow \$8$$

$$\frac{200 \text{ pg}}{\$3.50} = \frac{1 \text{ pg}}{x}$$

$$\frac{200x}{200} = \frac{3.50}{200}$$

$$x = 0.0175$$

$$x = \$0.02$$

$$\frac{500 \text{ pg}}{\$8} = \frac{1 \text{ pg}}{x}$$

$$8 = \frac{500x}{500}$$

$$0.016 \quad \$0.02 = x$$

DO NOW ~ Friday 9/6

Kirk has 42 pieces of candy to divide evenly between his three children. If he puts the pieces into three boxes, how many pieces of candy are there per box?

$$\frac{42 \text{ pieces}}{3 \text{ kids}} = 14 \text{ pieces}$$



Classwork

A car traveling on the Taconic parkway travels 84 miles in two hours. What is the car's speed (a special type of rate) in miles per hour?

$$\frac{84 \text{ mi}}{2 \text{ hr}}$$

$$\frac{42 \text{ miles}}{1 \text{ hr}}$$

A car salesperson earns a \$500 fee per car she sells. If she sells 4 cars in one day, how much money does she earn in fees?

$$\$500 \cdot 4$$

$$\$2000$$

A person driving along the road moves at a rate of 56 miles per hour driven. How far does the person drive in 1.5 hours? Show the calculation you use in your answer and give your answer proper units.

$$\frac{56 \text{ mi}}{1 \text{ hr.}} \cdot \frac{1.5 \text{ hr}}{1}$$

$$84 \text{ mi}$$

DO NOW ~ Monday 9/9

Mr. Weiler has 32 students in his class. He wishes to place them into 8 groups of equal size. Which of the following represents the number of students per group?

(1) 256

(3) 6

(2) 2

(4) 4

$$\frac{32}{8} =$$



Classwork

Kimberly can type 75 words per minute. How many words can she type, at this rate, in 8 minutes?

$$\frac{75 \text{ words}}{1 \text{ min.}} \cdot \frac{8 \text{ min.}}{1}$$

$$600 \text{ words} / 8 \text{ min.}$$

Amy-Jo is buying raffle tickets. The raffles cost \$5.50 for an arm length of raffle tickets. How much will it cost Amy-Jo if she wishes to purchase 5 arm lengths worth of raffle tickets?

$$\frac{\$5.50}{1 \text{ Arm}} \cdot \frac{5 \text{ Arm}}{1} = \$27.50$$

Using your answer from the last question, if there are 17 raffle tickets in an arm length, how many raffle tickets will Amy-Jo have purchased?

$$\frac{17 \text{ tickets}}{1 \text{ Arm}} \cdot \frac{5 \text{ Arm}}{1} = 85 \text{ tickets}$$

Mrs. Ferreri's Station ~ Procedures

- 1) *Materials*
- 2) *Graphing Calculator*
- 3) *Participation Points*
- 4) *Computer Logins*
- 5) *Google Classroom and Website*
- 6) *Finish "Getting to Know you"*

Computer Station ~ No Computer Today...Solving Proportions Task Cards Instead

With your group, work on solving proportions using the task cards.

If someone has a QR code scanner on their phone, you may use it to check your answers.

Your work MUST be shown below in order to receive credit.

Mrs. Kennedy's Station ~ Rates and Patterns

Solve the following questions and show your work. Your answer must be in a sentence using correct units.

Marcia is travelling to Rhode Island and is travelling at a rate of 65 miles per hour. If Rhode Island is 400 miles away, will she reach her destination in 6 hours? Explain.

Kathy has 6 red pencils for every 5 blue pencils in her pencil case. If she has 90 red pencils, how many blue pencils does she have?

For every 6 Pit Bulls at the New Rochelle Humane Society, there are 9 Shepherd Mixes. If there are currently 33 Shepherd Mixes at the shelter, what is the total number of dogs of either breed?

Joey is traveling at 6 meters per second. How long does it take Joey to travel exactly 81 meters?

Continue onto the next page.

A recipe calls for 2 cups of flour for every cup of butter. I am making the recipe with 5 cups of butter. How much flour do I need?

If a car travels at 40 miles per hour, how many *minutes* does it take the car to travel one mile?

A 12-ounce avocado contains 20 milligrams of vitamin C. An avocado salad uses 60 ounces of avocados. How much vitamin C do the avocados contribute to the salad?

There are 243 milligrams of calcium in 54 grams of an energy drink powder. Madisyn used 30 grams of energy drink powder to make a drink. How many milligrams of calcium did the drink contain?

Continue onto the next page.

What is the Better Buy?

You are finding the UNIT PRICE (How much money it is for ONE ounce)

Oreos
\$2.98 for 15.5oz

VS.

Chips Ahoy
\$2.50 for 14oz

Doritos
\$4.39 for 11.5oz

VS.

Cheetos
\$2.24 for 9.75oz

Cheerios
\$3.68 for 17oz

VS.

Apple Jacks
\$2.89 for 13oz

Independent Station ~ *Puzzle*

You and your group members will work together on putting together the puzzle that is in the bag. There is no picture to help you. Work together to try and put the puzzle together.

Homework ~ Wednesday 9/4

Tommy can run at a rate of 7 meters per second. How far will he have travelled if he runs at this rate for 30 seconds?

If there are 25 cookies in a container, how many cookies will Bernard have if Bernard buys 6 containers?

Homework ~ Thursday 9/5

Meg needs 120 slices of pizza for an upcoming party. If there are 8 slices in one pizza, how many pizzas should Meg order?

A runner is traveling at a constant rate of 8 meters per second. How long does it take for the runner to travel 100 meters?

Homework ~ Monday 9/9

Alexa can run at a rate of 3 feet per second. How far will she have travelled if she runs at this rate for 40 seconds?

If there are 16 muffins in a container, how many muffins will John have if he buys 3 containers?