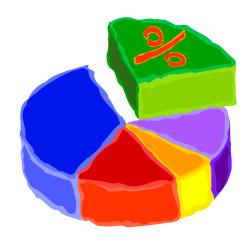
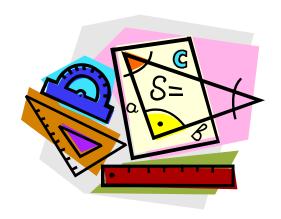


Fifth Grade Math Jeopardy





į	Traineer, Traineer Sense	una operations
\$1 0 0	Name a fraction that is equivalent $to \frac{2}{5}$.	Name the fraction and percent equivalent to 0.3
\$1 0 0	Twenty-eight students were going on the field trip to the zoo. The zoo has agreed to donate 32 packed lunches. What is the ratio of students to lunches?	Round 4.36 to the nearest tenth.
\$1 0 0	What is 7 ² ?	Blake had \$32 in the bank. He wrote a check for \$45 dollars. What is the balance in his account?
\$1 0 0	What property is modeled here? $(6 \times 3) \times 5 = 6 \times (3 \times 5)$	Which inverse operation could you use to help you solve this problem? $x - 28 = 32$

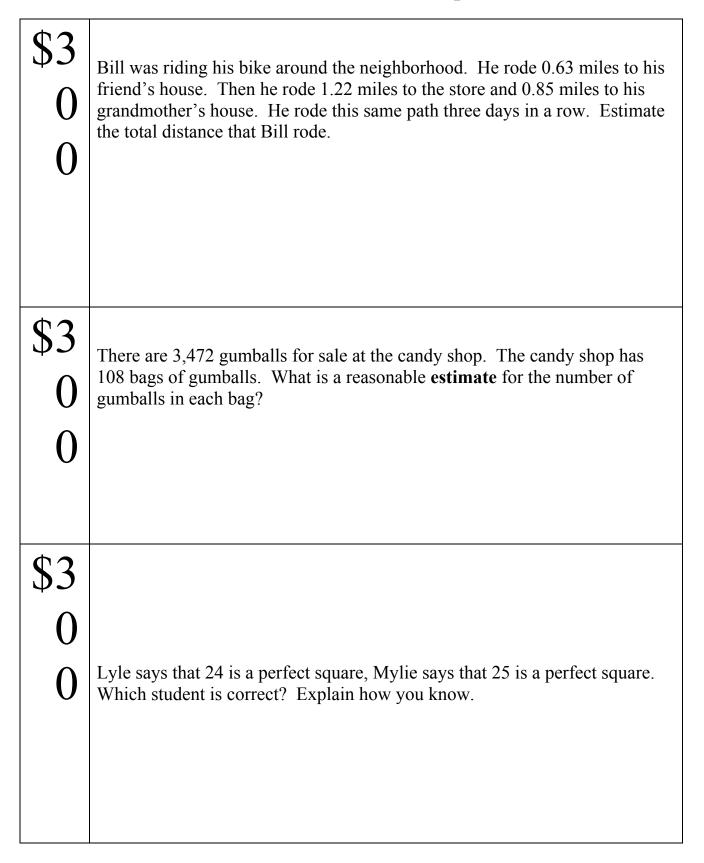
\$1 Parker had the following tools in his pencil box. What is the ratio of pencils to all tools? Look at the marbles below. What is the ratio of \$1 red marbles to blue? R В R G R В What is the ratio of Name a fraction and a \$1 shaded parts to the percent to represent the whole in the grid portion that is shaded below? below.

	inumber, mumber sense	and operations
\$2 0 0	In Kamar's card collection there were 12 baseball cards, 8 football cards and 16 basketball cards. What is the ratio of baseball cards to non-baseball cards?	What is the square root of 81?
\$2 0 0	Chen was counting the coins in a basket. He had 20 nickels, 116 pennies, and 80 quarters. Use the commutative property to mentally determine how many coins he has altogether. Explain your answer.	April had a bag of chocolate chip and peanut butter cookies. 7 out of 10 of the cookies were peanut butter. What percentage of the cookies were chocolate chip?
\$2 0 0	Scarlett was mixing paint. She used 0.54 of a yellow can and 0.3 of a blue can. How much paint did she mix in all?	J.J. is saving to buy a new bicycle. He has saved \$38.77. His sister gave him \$11.25. The bike he wants costs \$130.00. Estimate how much more J.J. needs to buy the bike.
\$2 0 0	Remi and Max were trading comic collection. He offered to trade $\frac{3}{4}$ of fraction of the 16 books that will be	his books with Max. Write the

\$2 Lauren's mom gave her the list of items below to get at the local store. About how much money does Lauren need to take with her? Milk \$2.29 Cheese \$1.87 Bread \$1.19 Tea \$0.45 Mr. Daniels class recorded the low temperature of the surrounding cities. Columbus -5, Dublin -1, Westerville 1, Hillard -3 Rank the cities in order from the lowest temperature to the highest temperature.

\$2 0 0	List the order in which these operations need to be solved. Use the order of operations and solve it. $3 + 5 \times (8 - 4) \div 2$
\$2 0 0	Use the order of operations to simplify the expression below. $6 + 3 \times (7 - 3)$
\$2 0 0	Miss Hewett wrote the following problem on the board: 418.86 ÷ 7 Explain or show an estimation strategy that you could use to get an approximate answer to this problem.

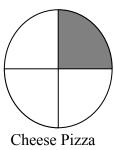
\$3 0 0	Olivia's mother made brownies. Juanita ate $\frac{1}{3}$ of the brownies, Hannah ate $\frac{2}{9}$ of the brownies, Olivia ate $\frac{3}{9}$ of the brownies and Marianne ate $\frac{1}{9}$ of the brownies. Which 2 girls ate the same amount of brownies?		
\$3 0 0	Sanjea had 24 marbles, eighteen of them are purple. What decimal and percent represents the purple marbles that Sanjea has?	Lupe wrote a fraction that was equivalent to 25%. Name a fraction she could have written and explain how you know it is equivalent.	
\$3 0 0	The cheerleading booth at the carnival was selling candy apples and caramel apples. They sold a total of 7,185 candy and caramel apples. About half of the apples sold were candy apples. Estimate about how many candy apples they sold?	Ariel got 9 out of 12 words correct on her spelling test. What percentage of her spelling test was correct?	



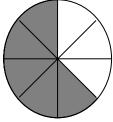
\$3

0

Darnell's mom ordered pizza for his party. The guests at the party ate $\frac{1}{4}$ of the cheese pizza and $\frac{5}{8}$ of the pepperoni pizza. How much total pizza did they eat?



+



Pepperoni Pizza

\$3 0

Jasmine made three paper airplanes. She kept track of the distance each of her paper airplanes traveled. She wrote her results on the chart below.

Airplane	A	В	C
Distance	$1\frac{1}{2}$	$\frac{1}{2}$	3
(in feet)	8	2	4

Estimate the total distance Jasmine's paper airplanes flew.

\$3

Javier wanted to buy some snacks at the movies. His choices are listed below:

0

He has \$10.00. He wants to buy 3 items. Use estimation to determine two different combinations of snacks he could buy.

Candy-\$2.25

Icee-\$2.78

Popcorn-\$3.13

Nachos-\$4.57

Pretzel-\$1.86

\$3

Kieran solved the problem below and got an answer of 10.

0

$$4 \times (6-3) + 9 \div 3$$

Did he solve this correctly? Explain your answer and show your work.

\$4 0 0	There are three pieces of ribbon laying on the table. One is $2\frac{2}{3}$ feet long, the second is $3\frac{3}{4}$ feet long and the third is $1\frac{1}{6}$ feet long. Drucilla says there are about 6 feet of ribbon on the table. Is her estimate correct? Explain your answer.	Grandma Jessie made fudge for the school bake sale. She is selling the fudge for \$1.53 a pound. Estimate about how many pounds of fudge can be bought for \$15.00.
\$4 0 0	Deering High School was putting on a school play. The first night of the play 836 people attended. There were 662 people the second day and 491 people on the third day. The principal estimated that about 2000 people total went to the play. Is the principal's estimate reasonable? Explain your answer.	The fifth-grade students at Edwards Elementary were selling candy bars. Each student was given 100 candy bars. Gertrude sold 10% of her candy bars. Lois sold $\frac{1}{5}$ of her candy bars and Daisy sold 0.15 of her candy bars. Which girl sold the most candy bars?
\$4 0 0	Moi earns \$6 dollars a week for each dog she walks. The first week she walked 8 dogs. The second week she walked 5 dogs. Write an equation using the distributive property to determine how much money Moi earned walking dogs and solve the equation to find the total. m = amount of money	Draw an array for a perfect square of 36? Write a number sentence with an exponent to represent the array.

\$4 0 0	There are four legs on every bug in a jar. There are twelve rooms that have jars in them. There are five bugs in each jar. Use the commutative property to determine how many legs there are altogether. Explain your answer.	The Rambling Ravens are playing in a basketball tournament. They are making flyers to hand out at school. There are about 48 students in each classroom. There are 29 classrooms. They want to make a flyer for each student in their school and the school down the street that has the same number of students. Estimate about how many flyers the team needs to make.
\$4 0 0	Juan bought $2\frac{1}{4}$ pounds of strawberries and $3\frac{5}{8}$ pounds of pineapple for a fruit salad. Estimate about how many pounds of fruit he bought.	Mr. Bauer has 24 sports cards. $\frac{2}{6}$ of the cards are baseball cards. How many of the cards are baseball cards? What is the ratio of baseball cards to all sports cards?
\$4 0 0	Johari baked a cake. She cut $\frac{1}{4}$ of the cake to take to work. She cut $\frac{3}{8}$ of the cake to take to her grandmother's house. How much cake is left?	Mr. Mosby took 12 boys to the movies for a birthday party. He bought each boy a popcorn for \$3.25 and a drink for \$1.75. Write an equation using the distributive property to determine how much money Mr. Mosby spent on snacks at the movies. s = amount spent on snacks

\$1 0 0	Name a fraction that is equivalent to $\frac{2}{5}$. Sample answer: $\frac{4}{10}$	Name the fraction and percent equivalent to 0.3 $\frac{3}{10} 30\%$
\$1 0 0	Twenty-eight students were going on the field trip to the zoo. The zoo has agreed to donate 32 packed lunches. What is the ratio of students to lunches? 28:32	Round 4.36 to the nearest tenth. 4.4
\$1 0 0	What is 7 ² ? 49	Blake had \$32 in the bank. He wrote a check for \$45 dollars. What is the balance in his account? \$-13
\$1 0 0	What property is modeled here? $(6 \times 3) \times 5 = 6 \times (3 \times 5)$ Associative Property	Which inverse operation could you use to help you solve this problem? $x - 28 = 32$ Addition

\$1

Parker had the following tools in his pencil box.

0

0



What is the ratio of pencils to all tools?

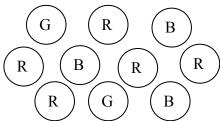
3:7

\$1

0

()

Look at the marbles below. What is the ratio of red marbles to blue?



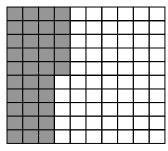
5:3

\$1

0

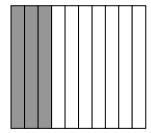
0

What is the ratio of shaded parts to the whole in the grid below?



35:100

Name a fraction and a percent to represent the portion that is shaded below.



 $30\% \frac{3}{10}$

	Trumber, Trumber Bense	una sperantins
\$2 0 0	In Kamar's card collection there were 12 baseball cards, 8 football cards and 16 basketball cards. What is the ratio of baseball cards to non-baseball cards? 12:24 or 1:2	What is the square root of 81? 9
\$2 0 0	Chen was counting the coins in a basket. He had 20 nickels, 116 pennies, and 80 quarters. Use the commutative property to mentally determine how many coins he has altogether. Explain your answer. 20 + 116 + 80 = 20 + 80 + 116. I added 20 + 80 first to get 100 and then 100 + 116 to get 216 coins.	April had a bag of chocolate chip and peanut butter cookies. 7 out of 10 of the cookies were peanut butter. What percentage of the cookies were chocolate chip? 30%
\$2 0 0	Scarlett was mixing paint. She used 0.54 of a yellow can and 0.3 of a blue can. How much paint did she mix in all? 0.84	J.J. is saving to buy a new bicycle. He has saved \$38.77. His sister gave him \$11.25. The bike he wants costs \$130.00. Estimate how much more J.J. needs to buy the bike. About \$80.00 $($40 + $10 = $50,$ $$130 - $50 = $80)$
\$2 0 0	Remi and Max were trading comic books. Remi has 16 books in his collection. He offered to trade $\frac{3}{4}$ of his books with Max. Write the fraction of the 16 books that will be traded. $\frac{12}{16}$ of the comic books	

\$2 0

Lauren's mom gave her the list of items below to get at the local store. **About** how much money does Lauren need to take with her?

0

Milk \$2.29 Cheese \$1.87 Bread \$1.19 Tea \$0.45

Students may say between \$5-7 depending on the estimation strategy they used. Have them share their strategy.

\$2

Mr. Daniels class recorded the low temperature of the surrounding cities.

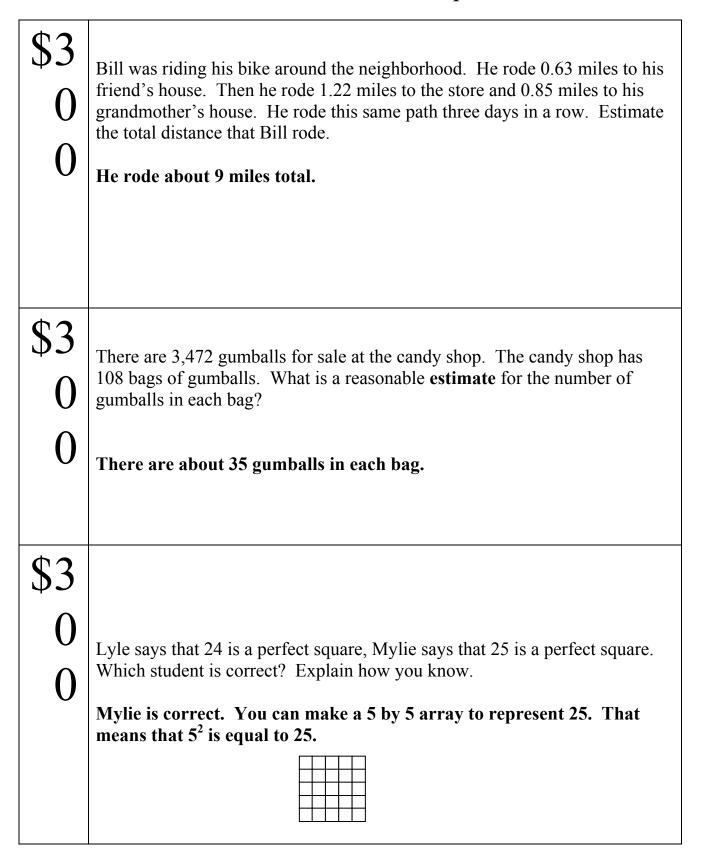
O Columbus -5, Dublin -1, Westerville 1, Hillard -3

Rank the cities in order from the lowest temperature to the highest temperature.

Columbus -5, Hillard -3, Dublin -1, Westerville 1

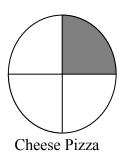
List the order in which these operations need to be solved. Use the order of operations and solve it.
$3+5\times(8-4)\div2$
Parentheses – Multiply – Divide – Add $3 + 5 \times 4 \div 2$
$3+20 \div 2$
3+10
13
Use the order of operations to simplify the expression below.
$6+3\times(7-3)$
$6+3\times4$
6 + 12
18
Miss Hewett wrote the following problem on the board:
418.86 ÷ 7
Explain or show an estimation strategy that you
could use to get an approximate answer to this
problem.
Answers will vary. One way is to use compatible numbers. $420 \div 7 = 60$

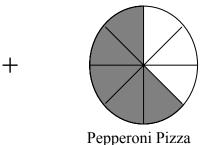
\$3 0 0		
\$3 0 0	Sanjea had 24 marbles, eighteen of them are purple. What decimal and percent represents the purple marbles that Sanjea has? 0.75 75%	Lupe wrote a fraction that was equivalent to 25%. Name a fraction she could have written and explain how you know it is equivalent. Students answers will vary Sample answer is $\frac{1}{4}$. Students should explain how they know it is equivalent.
\$3 0 0	The cheerleading booth at the carnival was selling candy apples and caramel apples. They sold a total of 7,185 candy and caramel apples. About half of the apples sold were candy apples. Estimate about how many candy apples they sold? About 3,500 (7,000 ÷ 2) or 3,600 (7,200 ÷ 2)	Ariel got 9 out of 12 words correct on her spelling test. What percentage of her spelling test was correct? 75%



\$3

Darnell's mom ordered pizza for his party. The guests at the party ate $\frac{1}{4}$ of the cheese pizza and $\frac{5}{8}$ of the pepperoni pizza. How much total pizza did they eat?





They ate $\frac{7}{8}$ of a whole pizza.

\$3

Jasmine made three paper airplanes. She kept track of the distance each of her paper airplanes traveled. She wrote her results on the chart below.

()

Airplane	A	В	С
Distance	11	1	3
(in feet)	8	2	4

Estimate the total distance Jasmine's paper airplanes flew.

$$2\frac{1}{2}$$
 feet

\$3

Javier wanted to buy some snacks at the movies. His choices are listed below:

0

He has \$10.00. He wants to buy 3 items. Use estimation to determine two different combinations of snacks he could buy.

Candy-\$2.25

Icee-\$2.78

Popcorn-\$3.13

Nachos-\$4.57

Pretzel-\$1.86

He can have any combination of 3 different things except the 3 most expensive items. (ie., Nachos, Popcorn and Pretzels or Icee, Popcorn and Nachos)

\$3

Kieran solved the problem below and got an answer of 10.

0

$$4 \times (6-3) + 9 \div 3$$

Did he solve this correctly? Explain your answer and show your work.

No, he should have gotten an answer of 15.

$$4 \times 3 + 9 \div 3$$

 $12 + 9 \div 3$
 $12 + 3$
 15

There are three pieces of ribbon

laying on the table. One is $2\frac{2}{3}$ feet long, the second is $3\frac{3}{4}$ feet long and

the third is $1\frac{1}{6}$ feet long. Drucilla says there are about 6 feet of ribbon on the table. Is her estimate correct? Explain your answer.

No, there is about 8 feet of ribbon on the table. $2\frac{2}{3}$ is about 3 feet,

 $3\frac{3}{4}$ is about 4 feet, and $1\frac{1}{6}$ is

about 1 foot. 3 + 4 + 1 = 8

Grandma Jessie made fudge for the school bake sale. She is selling the fudge for \$1.53 a pound. Estimate **about** how many pounds of fudge can be bought for \$15.00.

About 10 pounds of fudge can be bought with \$15.

Deering High School was putting on a school play. The first night of the play 836 people attended. There were 662 people the second day and 491 people on the third day. The principal estimated that about 2000 people total went to the play. Is the principal's estimate reasonable? Explain your answer.

Yes, his estimate is reasonable. 836 is about 800, 662 is about 700, 491 is about 500.

800 + 700 + 500 = 2000.

The fifth-grade students at Edwards Elementary were selling candy bars. Each student was given 100 candy bars. Gertrude sold 10% of her candy bars.

Lois sold $\frac{1}{5}$ of her candy bars and Daisy sold 0.15 of her candy bars. Which girl sold the most candy bars?

Lois sold 20 candy bars, Gertrude sold 10 candy bars, and Daisy sold 15 candy bars, so Lois sold the most.

Moi earns \$6 dollars a week for each dog she walks. The first week she walked 8 dogs. The second week she walked 5 dogs. Write an equation using the distributive property to determine how much money Moi earned walking dogs and solve the equation to find the total.

m = amount of money $(6\times8)+(6\times5)=m$ or 48 + 30 = m $6 \times (8 + 5) = m$ m = 78

Draw an array for a perfect square of 36? Write a number sentence with an exponent to represent the array.

$$6^2 = 6 \times 6$$



There are four legs on every bug in a jar. There are twelve rooms that have jars in them. There are five bugs in each jar. Use the commutative property to determine how many legs there are altogether. Explain your answer. $4 \times 12 \times 5 \text{ or } 4 \times 5 \times 12 = 20 \times 12 =$

240 $12 \times 5 = 60 \times 4 = 240 \text{ legs}$

It is easier to multiply 12 and 5 to get 60 and then to multiply that number

The Rambling Ravens are playing in a basketball tournament. They are making flyers to hand out at school. There are about 48 students in each classroom. There are 29 classrooms. They want to make a flyer for each student in their school and the school down the street that has the same number of students. Estimate **about** how many flyers the team needs to make.

They need about 1500 fliers for each school. Since there are two schools they will need about 3000 flyers.

Juan bought $2\frac{1}{4}$ pounds of

strawberries and $3\frac{5}{8}$ pounds of

pineapple for a fruit salad. Estimate about how many pounds of fruit he bought.

He bought about $6\frac{1}{2}$ pounds.

$$2\frac{1}{4} = 2\frac{1}{2}, \ 3\frac{5}{8} = 4$$
$$2\frac{1}{2} + 4 = 6\frac{1}{2}$$

Mr. Bauer has 24 sports cards. $\frac{2}{6}$ of the cards are baseball cards. How many of the cards are baseball cards? What is the ratio of baseball cards to all sports cards?

There are 8 baseball cards. The ratio of baseball cards to sports cards is 8:24 or 1:3.

Johari baked a cake. She cut $\frac{1}{4}$ of the cake to take to work. She cut $\frac{3}{9}$ of the cake to take to her grandmother's house. How much cake is left?

 $\frac{3}{6}$ of the cake is left.

Mr. Mosby took 12 boys to the movies for a birthday party. He bought each boy a popcorn for \$3.25 and a drink for \$1.75. Write an equation using the distributive property to determine how much money Mr. Mosby spent on snacks at the movies.

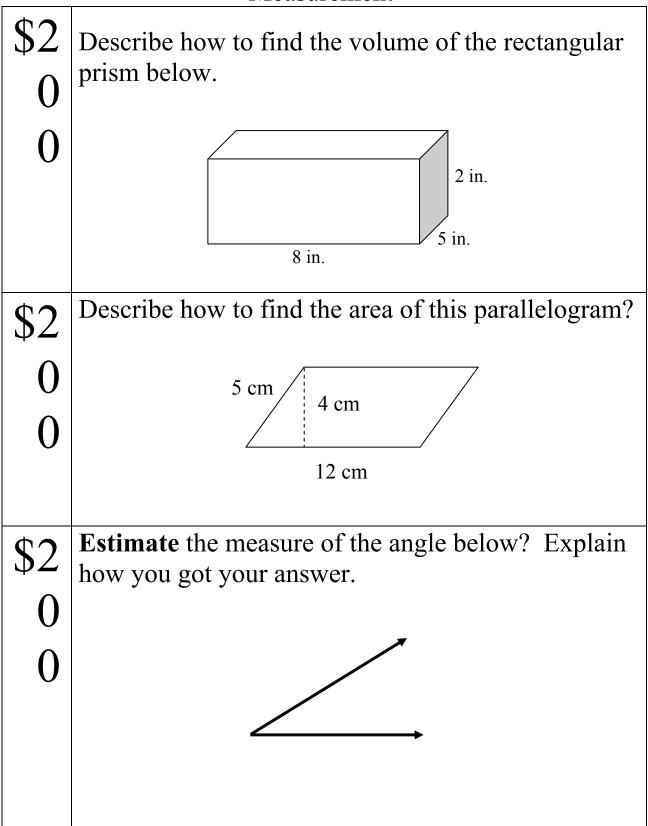
s = amount spent on snacks

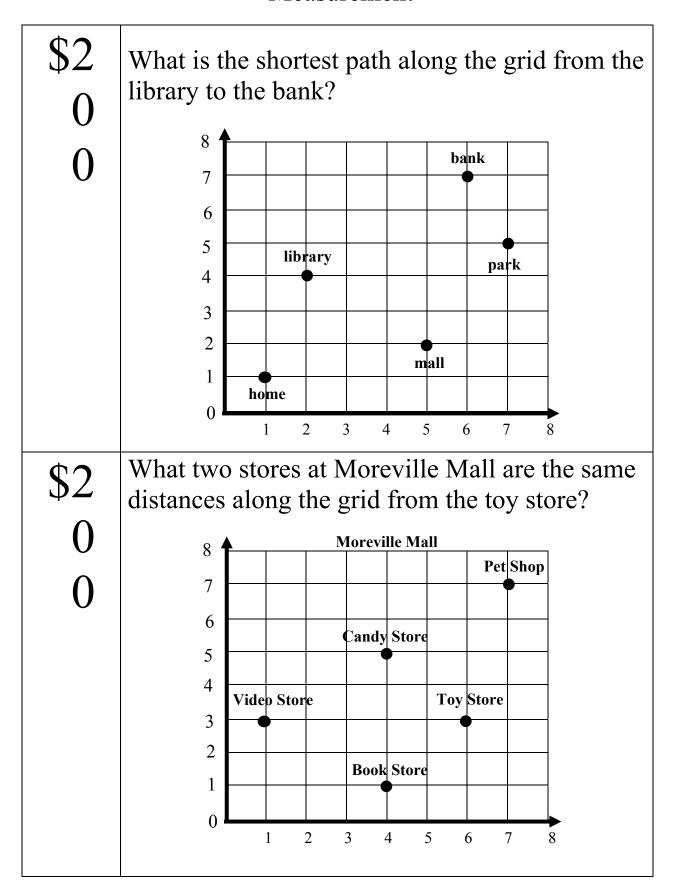
$$(12 \times 3.25) + (12 \times 1.75) = s$$

 $12 \times (3.25 + 1.75) = s$
 $12 \times (5) = s$
 $s = 60$
He spent \$60.00

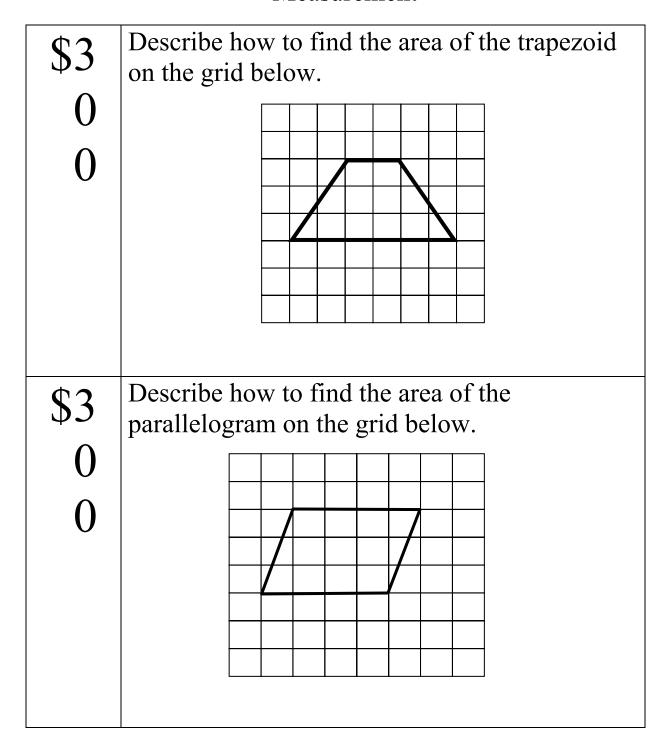
\$1 0 0	Ross covered his bathroom floor with tile. What unit of measure describes how much tile he used?	Ian is filling up his sister's pool. If he wants to know the amount of water in the pool would he find the volume or the surface area?	Change 75 liters to milliliters.
\$1 0 0	Austin is wrapping a present for his mother. He needs to find out how much paper to use. Does he need to find the volume or the surface area?	Marlene is trying to determine the amount of cereal she will need to fill up a box. What unit of measure would she use?	How many centimeters are in 5.389 meters?
\$1 0 0	Kelli is measuring the perimeter of her room in order to determine how much wall border she will need. What unit of measure should she use? (linear, square or cubic)	Merril is measuring angles. What unit should she use?	The school play lasts for $3\frac{1}{4}$ hours. How many minutes is the play?
\$1 0 0	Change 0.045 kilograms to grams.	Draw an angle that is greater than 90°. Explain the strategy you used.	How many inches are in 3.5 yards?

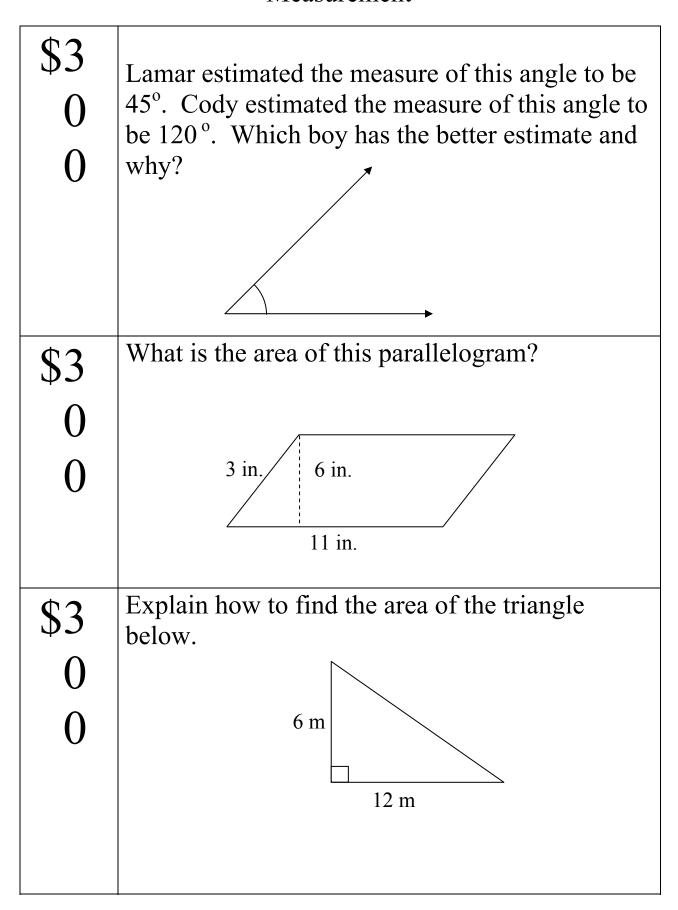
\$2 0 0	Describe how to find the surface area a box.	Dominic and Zoey work at Chewy Fruities Cereal Factory. Zoey is in charge of covering the boxes of cereal with a label. Dominic is in charge of filling up each box with cereal. Which job deals with volume and which job deals with surface area?
\$2 0 0	Emerson is trying to see how many sugar cubes will fit into a box. What unit of measure is Emerson trying to find?	Siena is placing 4 gallons and 6 quarts of juice in pint size containers. How many containers will she fill?
\$2 0 0	Draw an angle that measures about 30°.	There were two frogs in a frog jumping contest. Frog A jumped 3,800 centimeters and Frog B jumped 2.4 meters. Which frog jumped the farthest?
\$2 0 0	Abbee measured her floor so she would know how much carpet to order. Abbee is not sure if she should use linear or square units. Explain to her which type of unit she should use and why.	

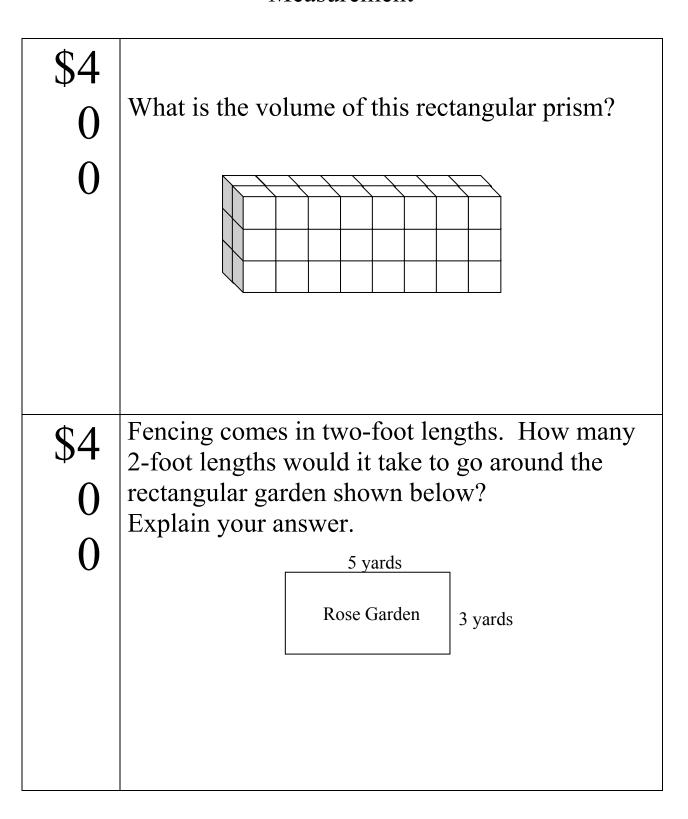


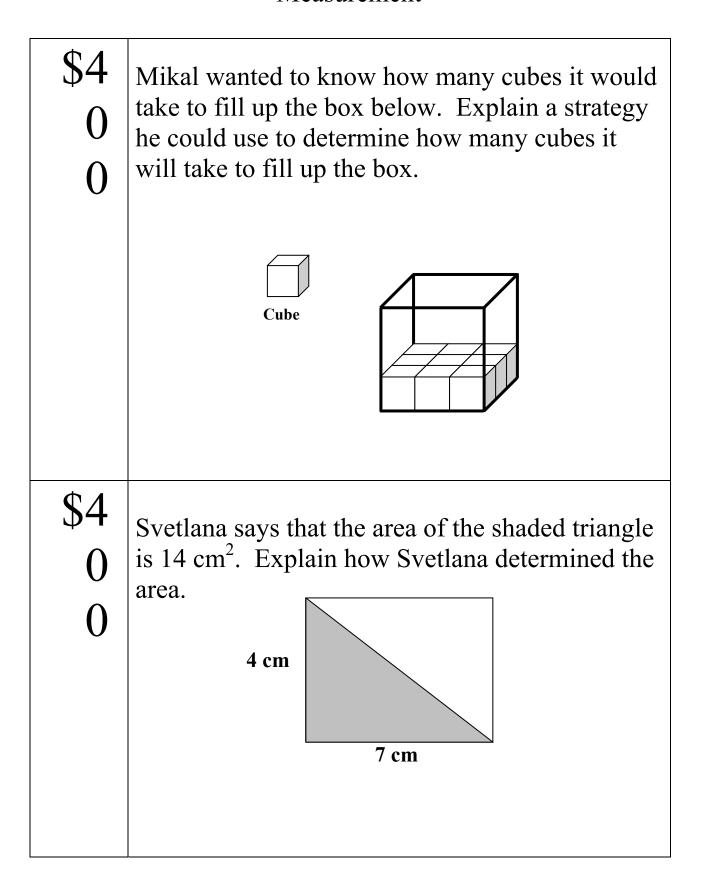


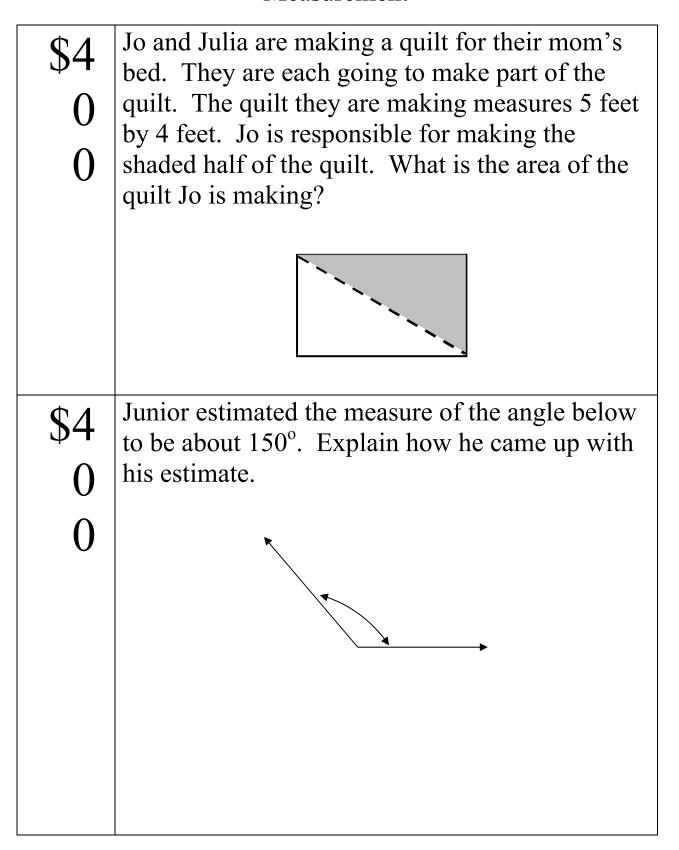
\$3 0 0	Explain the difference between the volume and the surface area of a box.	Omarion was packing bags of peanuts that were going to be shipped to baseball parks. He had three different size bags of peanuts. The bags weighed 60 grams, 2.5 kilograms, and 352 decigrams. Order the bags from least to greatest.	
\$3 0 0	Nadir works at the movie theatre filling up bags with popcorn. Explain to him how volume helps to determine how much popcorn is needed.	Hernando made 6.5 pints of fruit punch and 3 quarts of grape punch. How many cups of punch did he make altogether?	
\$3 0 0	Samir is filing up different beakers. He places 2 milliliters in the first beaker; 4 milliliters in the second beaker and $\frac{1}{2}$ of a milliliter in the third beaker. How many total liters are in all three beakers?	One bag of peanuts weighs 8.32 grams. How many kilograms do 3 bags of peanuts weigh?	
\$3 0 0	Marco says that he can use angles measuring 45°, 90°, and 120° to make estimates about the measures of other angles. Explain how he does this?		







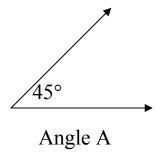


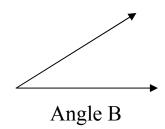


\$4

0

Two angles were drawn on the board. Mrs. Reed wrote the measure of Angle A on the board. Ivan estimated the measure of Angle B as 32°. How could Ivan have come up with this angle measure?



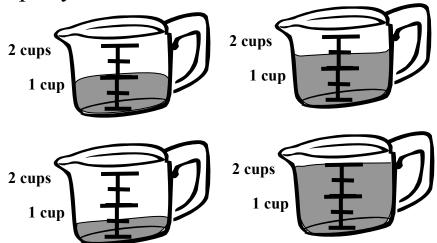


54 0 The football coach brought 16 quarts of water to practice. Each player gets two cups of water during practice. There are 21 players on the team. Did the coach bring enough water?

Darby is having a party. Her mother made 12 quarts of fruit punch and 3.5 gallons of tea. How many more cups of tea did she make than fruit punch?

\$4 0

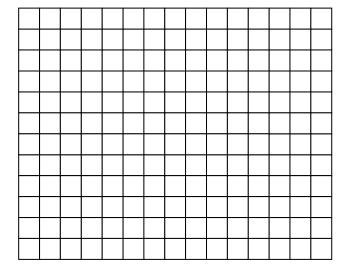
You need 2 quarts of lemonade for a class party. Several students have brought in lemonade. Did the students bring enough lemonade in for the class party?



\$4

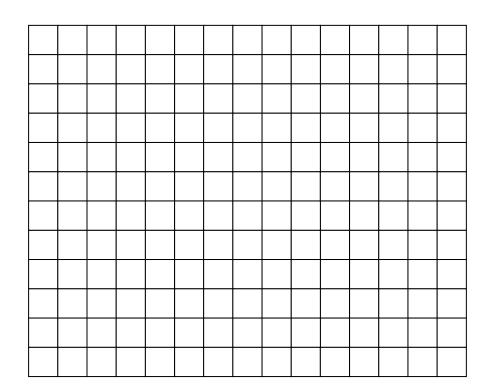
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Draw a triangle on the grid that has an area of 12 square units. Explain how you drew your triangle.



\$4 0

Draw a rectangle on the grid. Determine the area and perimeter of the rectangle

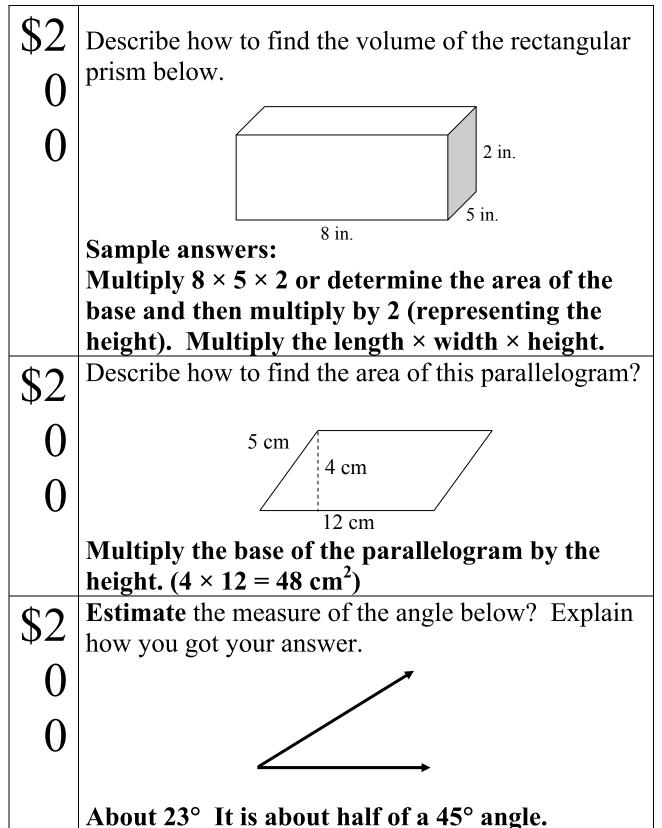


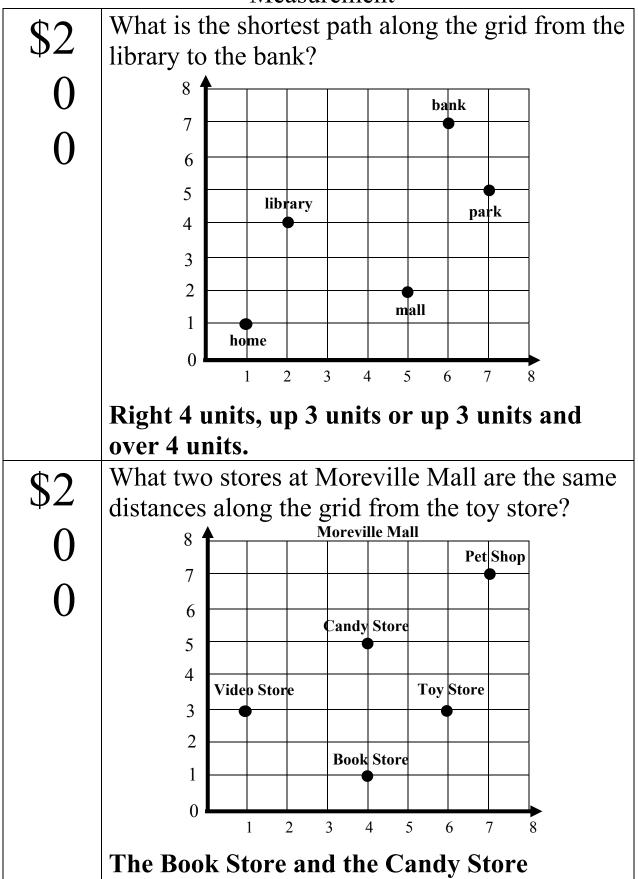
Area = _____

Perimeter = ____

			<u> </u>
\$1 0 0	Ross covered his bathroom floor with tile. What unit of measure describes how much tile he used? Square units	Ian is filling up his sister's pool. If he wants to know the amount of water in the pool would he find the volume or the surface area? Volume	Change 75 liters to milliliters. 75,000 milliliters
\$1 0 0	Austin is wrapping a present for his mother. He needs to find out how much paper to use. Does he need to find the volume or the surface area? Surface Area	Marlene is trying to determine the amount of cereal she will need to fill up a box. What unit of measure would she use? Cubic units	How many centimeters are in 5.389 meters? 538.9 meters
\$1 0 0	Kelli is measuring the perimeter of her room in order to determine how much wall border she will need. What unit of measure should she use? (linear, square or cubic) Linear units	Merril is measuring angles. What unit should she use? Degrees	The school play lasts for $3\frac{1}{4}$ hours. How many minutes is the play? 195 minutes
\$1 0 0	Change 0.045 kilograms to grams. 45 grams	Draw an angle that is greater than 90°. Explain the strategy you used. Students answers may vary. They may discuss how they used the benchmark angles of 90° or 120° to help them make their angle.	How many inches are in 3.5 yards? 126 inches

\$2 0 0	Describe how to find the surface area a box. Students should discuss an appropriate strategy. They may say to find the area of each face and add them together.	Dominic and Zoey work at Chewy Fruities Cereal Factory. Zoey is in charge of covering the boxes of cereal with a label. Dominic is in charge of filling up each box with cereal. Which job deals with volume and which job deals with surface area? Zoey's job involves surface area; Dominic's job involves volume.
\$2 0 0	Emerson is trying to see how many sugar cubes will fit into a box. What unit of measure is Emerson trying to find? Volume	Siena is placing 4 gallons and 6 quarts of juice in pint size containers. How many containers will she fill? 44 containers
\$2 0 0	Draw an angle that measures about 30°. Accept reasonable approximations of a 30° angle.	There were two frogs in a frog jumping contest. Frog A jumped 3,800 centimeters and Frog B jumped 2.4 meters. Which frog jumped the farthest? Frog A jumped the farthest.
\$2 0 0	Abbee measured her floor so she would know how much carpet to order. Abbee is not sure if she should use linear or square units. Explain to her which type of unit she should use and why. She should use square units. Students may explain that the tiles will cover the length and the width.	





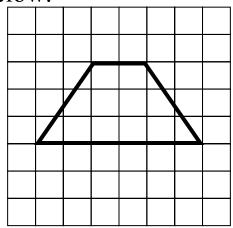
	Ivicasurement				
\$3 0 0	Explain the difference between the volume and the surface area of a box. The volume measure how much the interior of the box will hold. The surface area measures how much it takes to cover the box.	Omarion was packing bags of peanuts that were going to be shipped to baseball parks. He had three different size bags of peanuts. The bags weighed 60 grams, 2.5 kilograms, and 352 decigrams. Order the bags from least to greatest. 352 dg (3.52 g) – 60 g – 2.5 kg (2500.0 g)			
\$3 0 0	Nadir works at the movie theatre filling up bags with popcorn. Explain to him how volume helps to determine how much popcorn is needed. Volume determines the amount of space inside a 3-D object. Measure the length, width and height of the bag and multiply them together to determine the volume.	Hernando made 6.5 pints of fruit punch and 3 quarts of grape punch. How many cups of punch did he make altogether? He made 25 cups of punch.			
\$3 0 0	Samir is filing up different beakers. He places 2 milliliters in the first beaker; 4 milliliters in the second beaker and $\frac{1}{2}$ of a milliliter in the third beaker. How many total liters are in all three beakers? 0.0065 liters	One bag of peanuts weighs 8.32 grams. How many kilograms do 3 bags of peanuts weigh? .02496 kilograms			
\$3 0 0	Marco says that he can use angles measuring 45°, 90°, and 120° to make estimates about the measures of other angles. Explain how he does this? He uses them as a benchmark to help draw the angles. You can draw a 90° angle and cut it in half to get a 45° angle. You get 120° if you cut a straight angle into 3 equal parts. One part measures 60°, 2 parts measure 120°.				

\$3

Describe how to find the area of the trapezoid on the grid below.

0

0



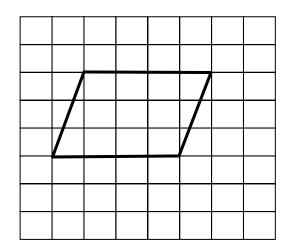
Count the number of squares

\$3

Describe how to find the area of the parallelogram on the grid below.

0

0



Sample Answer: Count the number of squares in the length and the number of squares in the height. Multiply the numbers together.

\$3

Lamar estimated the measure of this angle to be 45°. Cody estimated the measure of this angle to be 120°. Which boy has the better estimate and why?

Lamar has the better estimate. This angle is acute because it measures less than 90°.

\$3

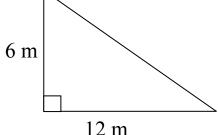
What is the area of this parallelogram?

3 in. 6 in.

11 in. The area is 66 in².

\$3

Explain how to find the area of the triangle below.



Multiply the length and the height and divide the product in half.

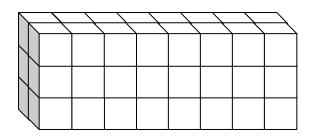
$$(6 \times 12 = 72; 72 \div 2 = 36 \text{ m}^2)$$

\$4

0

What is the volume of this rectangular prism?

0



The volume of this rectangular prism is 48 cubic units.

\$4

0

Fencing comes in two-foot lengths. How many 2-foot lengths would it take to go around the rectangular garden shown below? Explain your answer.

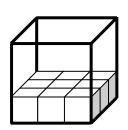
0

They will need 27 lengths of fencing to go around the garden. Student explanations should include that they must find the perimeter of the garden 2(5+3)=16 or $(5\times2)+(3\times2)=16$). Because the perimeter is measured in yards and the fencing is sold in feet, they must determine how many feet are in 18 yards. (3 feet in one yard; $18\times3=54$) they have 54 feet of fencing needed. The fencing comes in 2-foot lengths so they will need 27 lengths of fencing $(54 \div 2 = 27)$.

\$4

Mikal wanted to know how many cubes it would take to fill up the box below. Explain a strategy he could use to determine how many cubes it will take to fill up the box.





Answers may vary. He could find out how many cubes it would take to cover the bottom of the box and then find out how many layers he would have to make with those cubes to fill up the box. By multiplying these numbers he would find the total number of cubes he would need to fill the box.

\$4

Svetlana says that the area of the shaded triangle is 14 cm². Explain how Svetlana determined the area.

4 cm

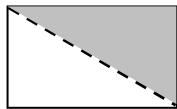
7 cm

Answers may vary. She found the area of the rectangle by multiplying the length times the width (4×7) . Because a triangle is half of a rectangle, she divided the area of the rectangle by 2 to get the answer.

\$4

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Jo and Julia are making a quilt for their mom's bed. They are each going to make part of the quilt. The quilt they are making measures 5 feet by 4 feet. Jo is responsible for making the shaded half of the quilt. What is the area of the quilt Jo is making?



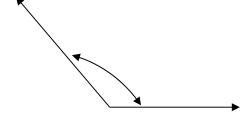
The area of the whole rectangle is 20 ft^2 (5 × 4). Because she is only making half of the quilt, divide that in half. Jo is making a quilt with an area of 10 ft^2 .

\$4

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()

Junior estimated the measure of the angle below to be about 150°. Explain how he came up with his estimate.

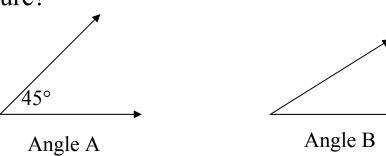


The angle is greater than 90° but less than 180° .

\$4

Two angles were drawn on the board. Mrs. Reed wrote the measure of Angle A on the board. Ivan estimated the measure of Angle B as 32°. How could Ivan have come up with this angle measure?

0



He used 45° as the benchmark. He knew Angle B was smaller than Angle A so he made an estimate based on the 45° angle.

\$4 0 The football coach brought 16 quarts of water to practice. Each player gets two cups of water during practice. There are 21 players on the team. Did the coach bring enough water?

Yes he did. He brought 64 cups of water and only needed 42 for each player to have 2 cups.

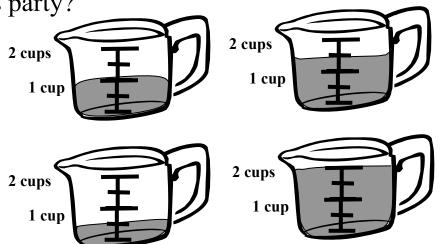
Darby is having a party. Her mother made 12 quarts of fruit punch and 3.5 gallons of tea. How many more cups of tea did she make than fruit punch? She made 8 more cups of tea than fruit punch. (56 cups of tea, 48 cups of fruit punch)

\$4

0

You need 2 quarts of lemonade for a class party. Several students have brought in lemonade. Did the students bring enough lemonade in for the class party?





No, there are only 5 cups and you need 8 cups for 2 quarts.

\$4

0

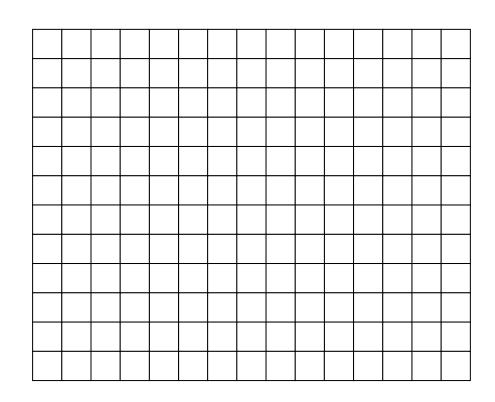
Draw a triangle on the grid that has an area of 12 square units. Explain how you drew your triangle.

0

Students should correctly draw a triangle that has an area of 12 square units. Their explanation may include the fact that they drew a rectangle with an area of 24 units and used the diagonal of the rectangle to create their square.

\$ 4
0
\cap

Draw a rectangle on the grid. Determine the area and perimeter of the rectangle



Area =

Perimeter =

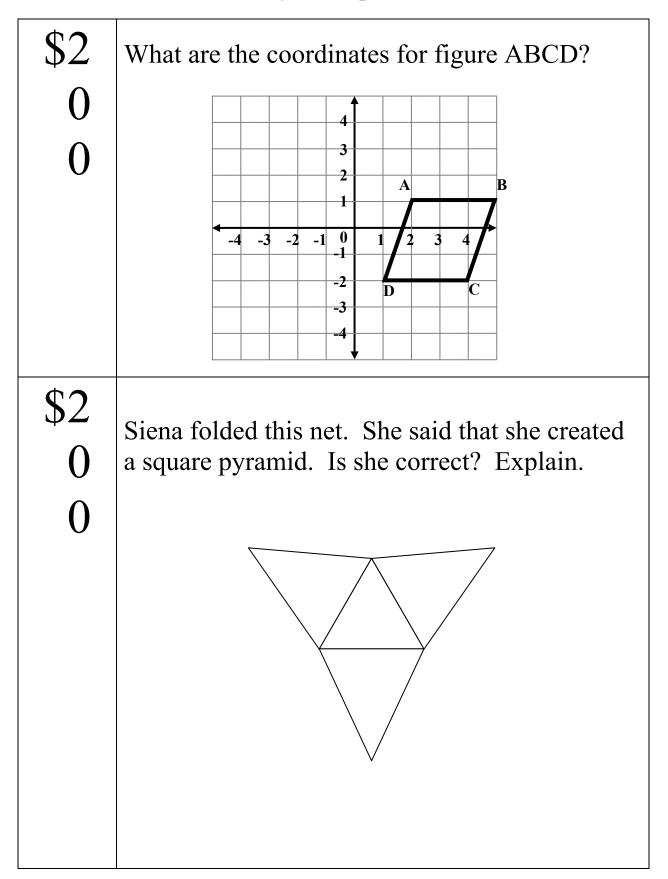
Student answers will vary. Accept answers that include a correctly drawn rectangle with the correct area and perimeter.

\$1 0 0	Draw and label a straight angle.	Draw an obtuse angle	Line \overline{AB} is parallel to line \overline{CD} . Draw the two lines.
\$1 0 0	Draw and label a right angle.	Which solid figure has only one vertex?	What is the difference between a square pyramid and a triangular pyramid?
\$1 0 0	You have a circle with a diameter of 7 inches what would the radius be?	A circle has a radius of 16 feet. What is the diameter?	Draw a ray.
\$1 0 0	What is the total sum of the interior angles in an equilateral triangle?	What is the total sum of the interior angles in a quadrilateral?	How many lines of symmetry are in a rectangle?

\$2 0 0	How many edges does a cube have?	Draw a net for a cube.
\$2 0 0	Describe the relationship between the circumference of a circle and the diameter of a circle.	Draw a net for a triangular pyramid.
\$2 0 0	A circular track has a diameter of 15 feet. If you ran the circumference of the track, about how far would you run?	How many faces does a rectangular prism have?
\$2 0 0	Santino drew 4 lines on a piece of paper. He labeled them \overline{AB} , \overline{CD} , \overline{EF} , and \overline{GH} . Lines \overline{AB} and \overline{EF} are parallel. Lines \overline{CD} and \overline{GH} are perpendicular to lines \overline{AB} and \overline{EF} . Draw the lines.	

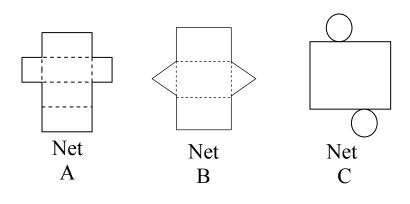
\$2 What shape will be made Marisol drew the shape when the net below is below. folded? She decided to draw the shape again. What transformation occurred? Kassandra drew the following lines on the board. \$2 Draw and label a line that intersects \overline{AB} . Draw and label a line that is parallel to \overrightarrow{CD} . Draw and label a

line that is perpendicular to \overrightarrow{AB} and \overrightarrow{CD} .

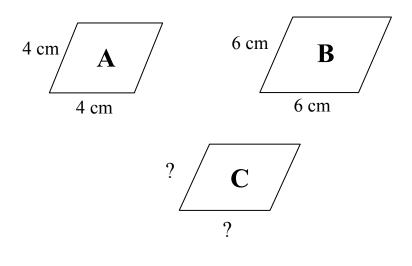


\$3 0 0	Explain how to estimate the radius of a circle that has a circumference of 36 feet.	The interior angles of a quadrilateral measure 45°, 151°, and 108°, what is the measure of the remaining angle?
\$3 0 0	A circle has a radius of 5 inches. Estimate the circumference of the circle.	If a triangle has an angle measure of 68° and 34°, what is the measure of the missing angle?
\$3 0 0	Explain how to estimate the circumference of a circle that has a diameter of 5 centimeters.	Draw 2 congruent shapes and explain how you know they are congruent.
\$3 0 0	Miranda had 2 shapes. She wanted to know if they were congruent. Explain to Miranda what congruent means and how to determine if the shapes are congruent.	

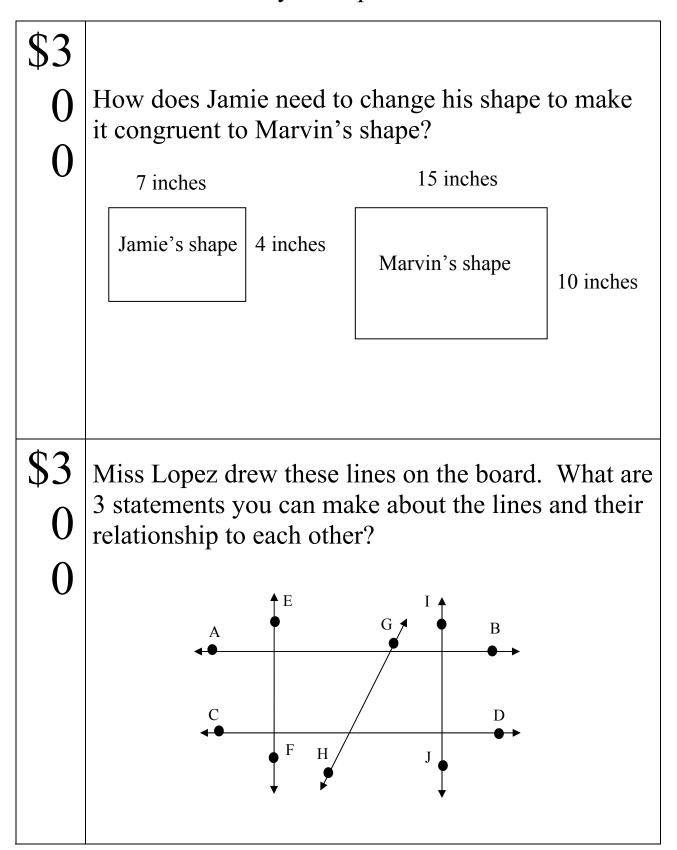
Georgiana had three nets. She wanted to create a rectangular prism. She couldn't decide what net was best to use. Explain to her which net she should use and why the other nets would not work.



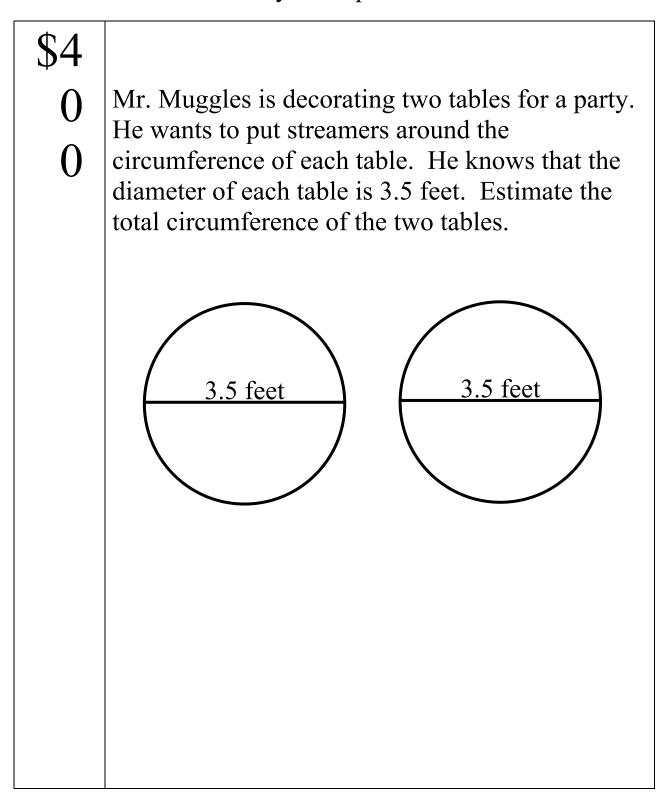
Renea drew three shapes on her paper. She measured each shape. She forgot to label the measurements of shape C. If shape A is congruent to shape C, what are the missing measurements? How do you know?



\$3 Kerri and Shaquira were asked to draw a translation of the trapezoid above. Kerri's paper looked like this. Shaquira's paper looked like this. Whose paper is correct? How do you know? Name the transformations that occurred on the other paper.



\$4 0	Two angles of Triangle A are 35° and 55°. Two angles of Triangle B are 20° and 70°. What is the third angle measurement for Triangle A and Triangle B? Are the triangles congruent? Explain your answer.
0	
\$4 0 0	Nadir wanted to estimate the circumference of a circle. He knew that the radius of the circle was 7 cm. He thinks that the circumference will be about 21 cm. Is he correct? If not, explain what he did wrong.
\$4 0 0	Draw a quadrilateral with at least one right angle and at least one pair of parallel sides.
\$4 0 0	The circumference of a circle is about 27 centimeters. What would be a reasonable estimate for the radius of the circle? Explain how you got your answer.

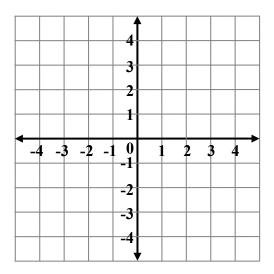


\$4

Plot and label the following points on the coordinate grid below:

A (-2, 2) B (1, -4) C (3, 4)

Then, determine which point, either A or B, is closer to Point C along the grid lines. Explain your answer.



\$4

Jamella is making a circular picture frame. She wants to put ribbon around the outside of the picture frame. If the radius of her picture frame is 4 in. About how many strips of ribbon will she need to go around the picture frame?

0

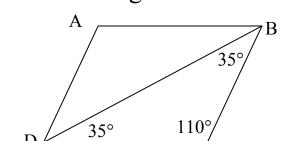
1 strip of ribbon = 1 inch

\$4

Diagonal BD bisects parallelogram ABCD.

0

Without using a protractor, determine the measure of the angles below. Explain how you found the measure of the angles.



∠ D _____

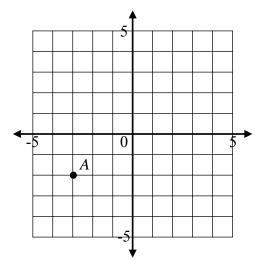
∠B ____

∠A _____

\$4

What are the coordinates for point A?

 $0 \\ 0$



Draw point B at (3, -4)

Draw point C anywhere on the grid and write the coordinates.

\$4

Diana drew the quadrilateral below. She measured the angles and recorded them inside the shape. Jordan borrowed Diana's protractor before she measured the final angle. Explain to Diana how she can use the measures of the other angles to determine the missing angle measure.

0

/102° 85°/

\$4

0

What shape will be made when the net below is folded?

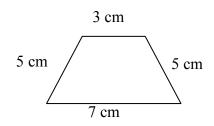
If the square became a triangle, what shape would be made?

How would the net change if it created a triangular prism?

\$4

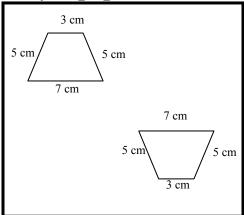
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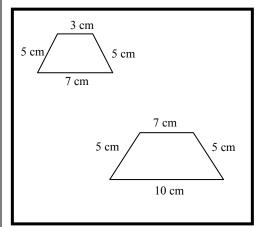


Trey and Leslie were asked to create a trapezoid that was congruent to the trapezoid above.

Trey's paper looked like this.



Leslie's paper looked like this.



Which paper is correct? Explain your answer.

\$1 0 0	Draw and label a straight angle.	Draw an obtuse angle Answers will vary. Accept any angle greater than 90° and less than 180°.	Line \overrightarrow{AB} is parallel to line \overrightarrow{CD} . Draw the two lines. A B C D
\$1	Draw and label a right angle.	Which solid figure has only one vertex?	What is the difference between a square pyramid and a triangular pyramid?
0	90°	A cone	The shape of the bases. A square pyramid has a square base and a triangular pyramid has a triangular base.
\$1 0 0	You have a circle with a diameter of 7 inches what would the radius be? 3.5 inches	A circle has a radius of 16 feet. What is the diameter? 32 feet	Draw a ray.
\$1 0 0	What is the total sum of the interior angles in an equilateral triangle? The sum of the angles 180°.	What is the total sum of the interior angles in a quadrilateral? The sum of the interior angles is 360°.	How many lines of symmetry are in a rectangle? There are 4 lines of symmetry in a rectangle.

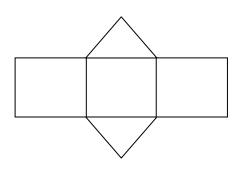
\$2 0 0	How many edges does a cube have? A cube has 12 edges.	Draw a net for a cube. Answers will vary. There are 11 possible nets for a cube.
\$2 0 0	Describe the relationship between the circumference of a circle and the diameter of a circle. The circumference of a circle is about three times bigger than the diameter of a circle. The diameter of a circle is about $\frac{1}{3}$ the circumference.	Draw a net for a triangular pyramid.
\$2 0 0	A circular track has a diameter of 15 feet. If you ran the circumference of the track, about how far would you run? You would run about 45 feet.	How many faces does a rectangular prism have? A rectangular prism has 6 faces.
\$2 0 0	Santino drew 4 lines on a piece of paper. He labeled them \overrightarrow{AB} , \overrightarrow{CD} , \overrightarrow{EF} , and \overrightarrow{GH} . Lines \overrightarrow{AB} and \overrightarrow{EF} are parallel. Lines \overrightarrow{CD} and \overrightarrow{GH} are perpendicular to lines \overrightarrow{AB} and \overrightarrow{EF} . Draw the lines. Possible answer A C G B F	

\$2 0

What shape will be made when the net below is folded?

Marisol drew the shape below.

0



She decided to draw the shape again.



This net makes a triangular prism.

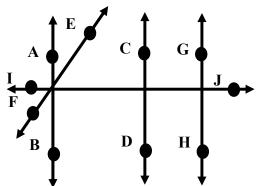
What transformation occurred?

A reflection

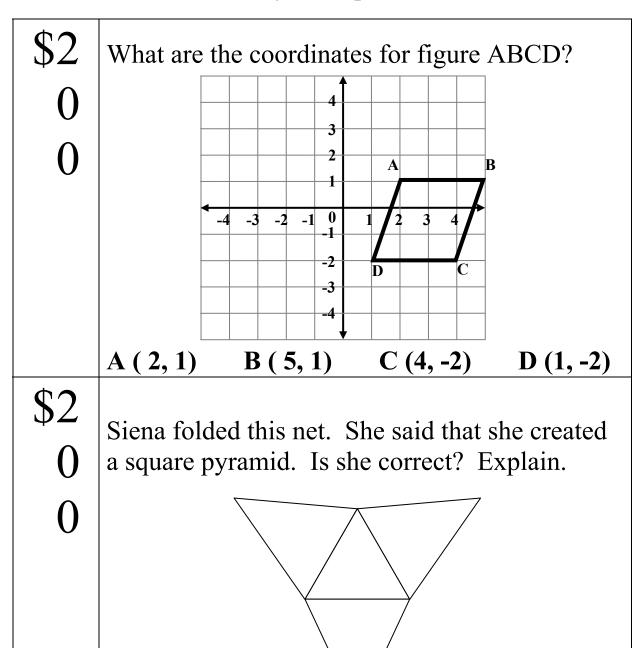
\$2

Kassandra drew the following lines on the board.

0



Draw and label a line that intersects \overrightarrow{AB} . Draw and label a line that is parallel to \overrightarrow{CD} . Draw and label a line that is perpendicular to \overrightarrow{AB} and \overrightarrow{CD} .

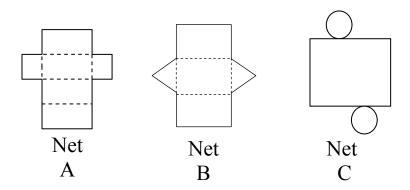


No, in order to be a square pyramid the shape of the base would need to be a square. Because the shape of the base is a triangle, when she folds it she will create a triangular pyramid.

	Geometry and Spar	
\$3	Explain how to estimate the radius of a circle that has a circumference of 36 feet.	The interior angles of a quadrilateral measure 45°, 151°, and 108°, what is the measure of the remaining angle?
0	Divide the circumference by 3 to find an estimate of the diameter $(36 \div 3 = 12)$. To estimate the radius, divide the diameter by $2(12 \div 2 = 6)$.	The missing angle measures 56° . The sum of the angles will be 360° . To find the missing angle add all the angles and subtract the sum from $360 (45 + 108 + 151 = 304; 360 - 304 = 56)$.
\$3 0 0	A circle has a radius of 5 inches. Estimate the circumference of the circle. The circumference of the circle is about 30 in.	If a triangle has an angle measure of 68° and 34°, what is the measure of the missing angle? The measure of the missing angle is 78°.
\$3 0 0	Explain how to estimate the circumference of a circle that has a diameter of 5 centimeters. The circumference of a circle is about three times greater than the diameter. OR the diameter is about $\frac{1}{3}$ the circumference. To estimate the circumference of this circle you multiply 5 by 3 (5 × 3 = 15 cm).	Draw 2 congruent shapes and explain how you know they are congruent. Answers and shapes will vary. A sample answer might include: They are congruent because they have exactly the same size and shape. I drew 2 squares and used my ruler to make sure they both measured 3 in.
\$3 0 0	Miranda had 2 shapes. She wanted to know if they were congruent. Explain to Miranda what congruent means and how to determine if the shapes are congruent. Shapes are congruent when they have exactly the same size and shape. Measure the length of each side of the shapes to determine if they are congruent.	

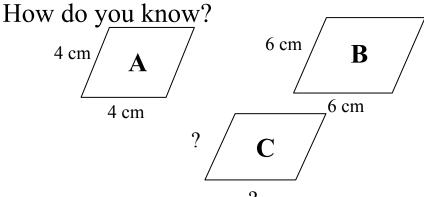
\$3

Georgiana had three nets. She wanted to create a rectangular prism. She couldn't decide what net was best to use. Explain to her which net she should use and why the other nets would not work.



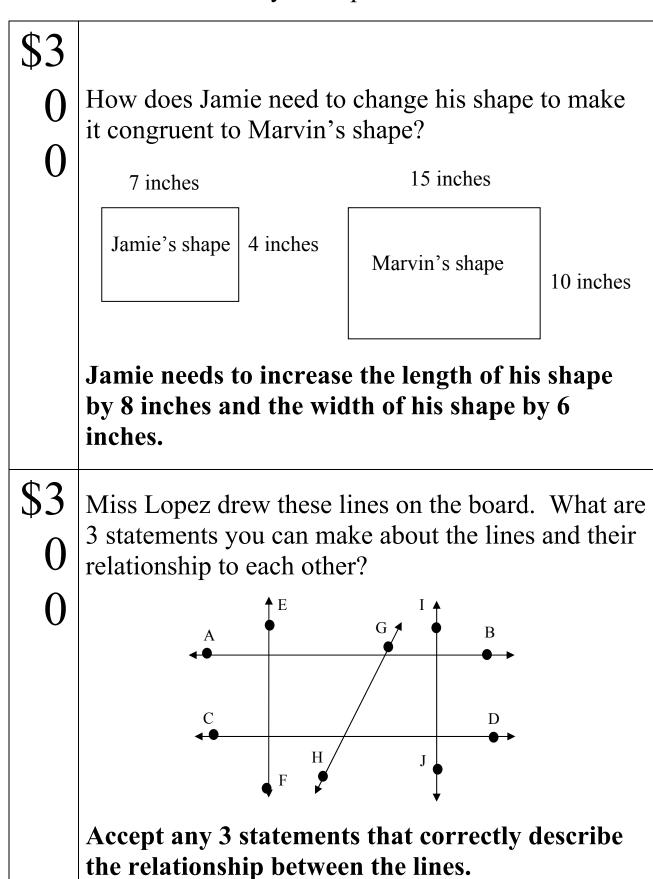
She needs to use Net A because when you fold it, it becomes a rectangular prism. Net B makes a triangular prism and Net C makes a cylinder.

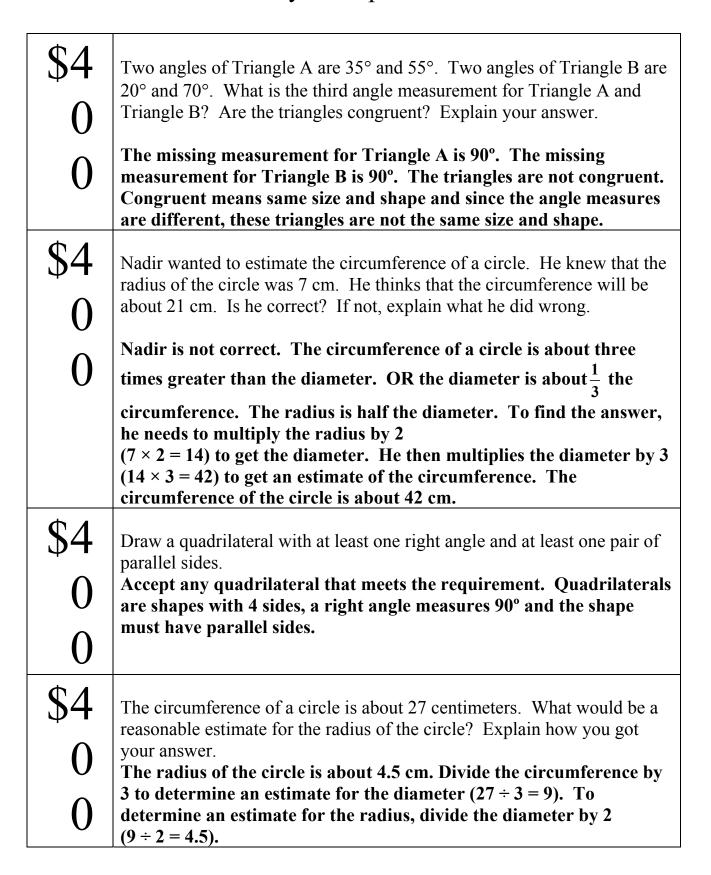
\$3 0 Renea drew three shapes on her paper. She measured each shape. She forgot to label the measurements of shape C. If shape A is congruent to shape C, what are the missing measurements?



Since shape A and C are congruent, they will have the same measurements. So the missing measurements for shape C are 4 cm.

\$3 Kerri and Shaquira were asked to draw a translation of the trapezoid above. Kerri's paper looked like this. Shaquira's paper looked like this. Whose paper is correct? How do you know? Name the transformations that occurred on the other paper. Kerri's paper is correct. A translation is when a shape has been moved horizontally or vertically without changing the orientation. Shaquira drew a rotation of the shape on her paper.

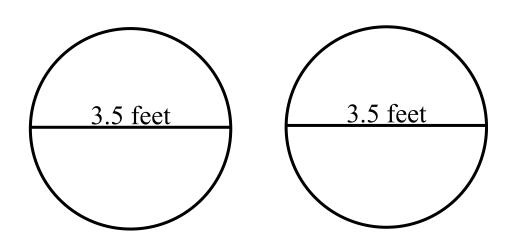




\$4

0

Mr. Muggles is decorating two tables for a party. He wants to put streamers around the circumference of each table. He knows that the diameter of each table is 3.5 feet. Estimate the total circumference of the two tables.



The circumference of both tables is about 21 feet. $(3.5 \times 3 = 10.5; 10.5 \times 2 = 21)$ or $(3.5 + 3.5 = 7 \times 3 = 21)$

\$4

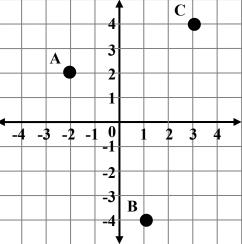
Plot and label the following points on the coordinate grid below:

A (-2, 2) B (1, -4) C (3, 4)

go around the picture frame?

Then, determine which point, either A or B, is closer to Point C along the grid lines. Explain your

answer.



Point A is closer to Point C. From Point A to Point C, go over 5 units and up 2 units. To get from Point B to Point C, go over 2 units and up 8 units.

Jamella is making a circular picture frame. She wants to put ribbon around the outside of the picture frame. If the radius of her picture frame is 4 in. About how many strips of ribbon will she need to

1 strip of ribbon = 1 inch

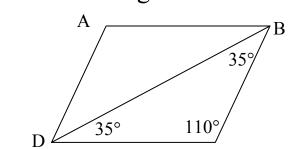
The circumference of the picture frame is about 24 in. She will need about 24 strips of ribbon.

\$4

Diagonal BD bisects parallelogram ABCD.

0

Without using a protractor, determine the measure of the angles below. Explain how you found the measure of the angles.



∠D <u>35°</u>

∠B <u>35°</u>

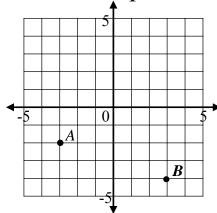
∠A <u>110°</u>

\$4

0

0

What are the coordinates for point A?



Draw point B at (3, -4)

Draw point C anywhere on the grid and write the coordinates.

The coordinates for point A are (-3, -2). Accept any placement of point C as long as the coordinates are correct.

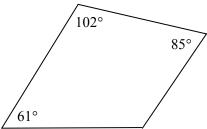
Diana drew the quadrilateral below. She

\$4

0

measured the angles and recorded them inside the shape. Jordan borrowed Diana's protractor before she measured the final angle. Explain to Diana how she can use the measures of the other angles

to determine the missing angle measure.



The sum of the interior angles in a quadrilateral is equal to 360° . To find the missing measure, Diana can find the sum of the three known angles (102 + 85 + 61 = 248) and then subtract the sum from 360 (360 - 238 = 112) to find the missing angle measure.

\$4

What shape will be made when the net below is folded?

0

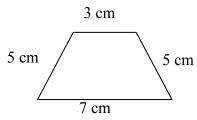
The net will make a square pyramid.

If the square became a triangle, what shape would be made? It would be a triangular pyramid. How would the net change if it created a triangular prism? The net would have 4 rectangular faces and two triangular faces that are parallel to each other.

\$4

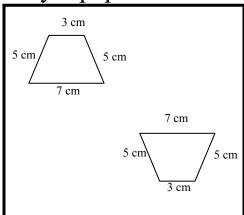
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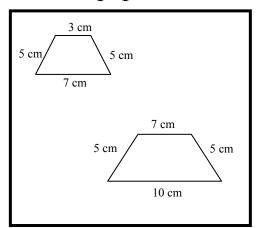


Trey and Leslie were asked to create a trapezoid that was congruent to the trapezoid above.

Trey's paper looked like this.



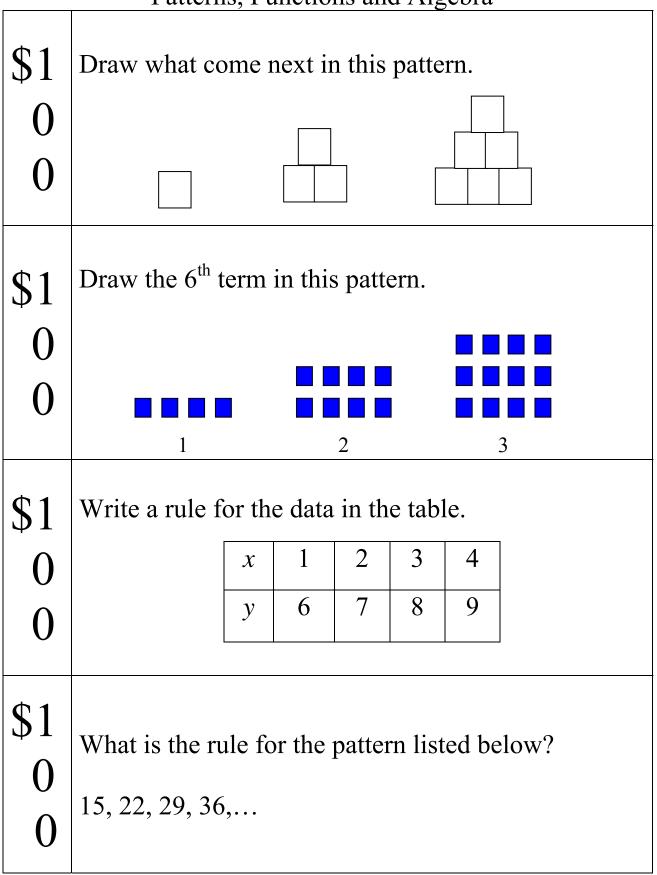
Leslie's paper looked like this.



Which paper is correct? Explain your answer.

Trey's paper is correct. They must be the same shape and size to be congruent.

\$1 0 0	Darrin added 3 to the product of a number and 4 and got 51. What was the number?	Solve $p - 18 \le 12$
\$1 0 0	Write an expression to show the following: nine more than three times a number	Write the following as an inequality Twice a number plus 4 is greater than or equal to 6
\$1 0 0	Write an equation that represents the following sentence. Eighteen added to four times a number is one hundred eight.	Kasper had \$25. He bought a present for his mother that cost <i>x</i> dollars. He now has less than \$8 left. Write an inequality to represent this situation.
\$1 0 0	Kamal does <i>j</i> number of jumping jacks each day. Write an expression to determine the number of jumping jacks he does in 5 days.	Solve $4m = 36$



1 atterns, Functions and Aigeora			
\$2 0 0	Make a table with 3 values that follows this rule: $3m + 1$	The principal is selling sweatshirts with the school colors for \$14. Write an equation to represent the number of sweatshirts (<i>s</i>) sold and the total amount (<i>a</i>)?	
\$2 0 0	A bus holds 36 people. Three people can sit in each seat. Write an equation to determine the number of seats (s) a bus has.	Andrea has 4 times as many marbles in her collection as Katrina. If Katrina has 14 marbles, write an equation to find the number of marbles Andrea has. Solve the equation.	
\$2 0 0	Hannah charges \$8.00 an hour to baby-sit. Last month she earned \$72. How many hours did she baby-sit? Write an equation to help you solve the problem where <i>h</i> , represents the number of hours.	Brandon went to the store to buy cupcakes. Cupcakes come packaged in groups of six. Each package costs \$3.25. Brandon has \$13.00. Write an inequality to show the number of packages of cupcakes that Brandon can buy.	
\$2 0 0	Corbin was picking apples for his uncle's grocery store. He picked a total of 274 apples. On the way to his uncle's store, he dropped some. If he gave his uncle a total of 221 apples, how many did he drop? Write an equation to help you solve the problem.	Write the following into an equation and solve: Seven less than a number is thirty-two	

\$2

0

What comes next in the pattern below.

0



Write a rule to go with this pattern.

\$2

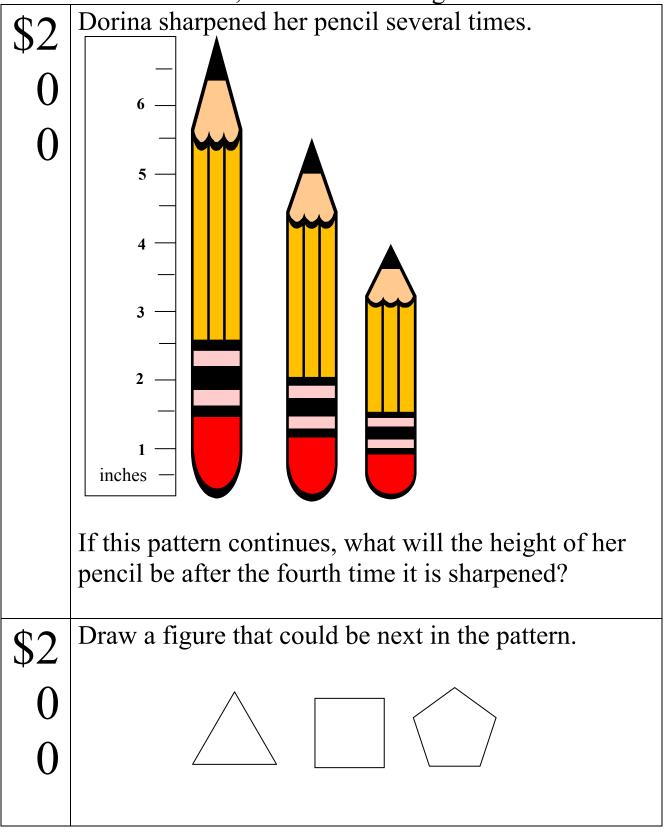
Mr. Brown wrote the following statement on the board:

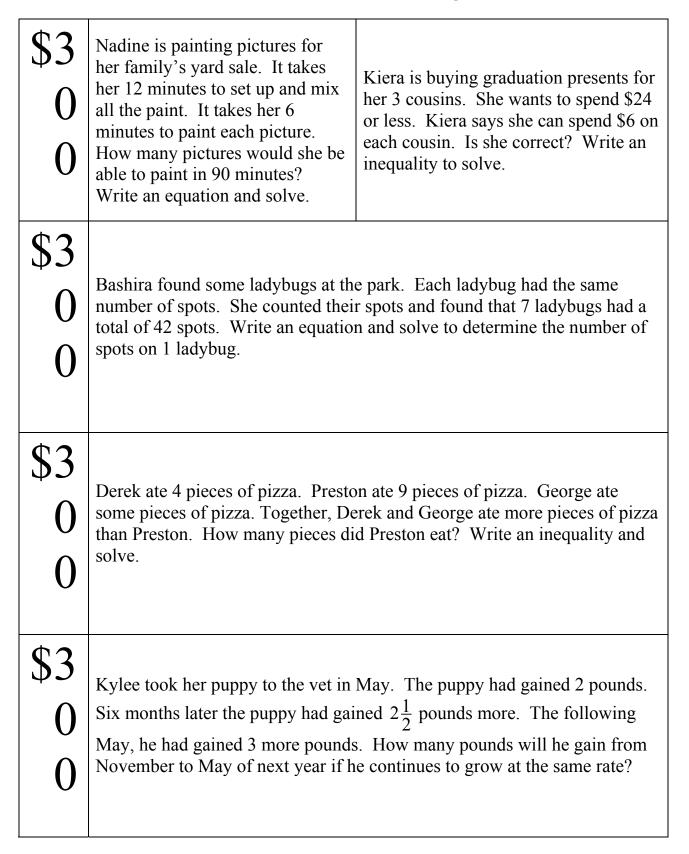
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Sixteen minus a number is equal to three less than five.

Chelsea wrote 16 - n = 5 - 3Eddie wrote n - 16 = 5 - 3

Which student wrote an equation that correctly represents the statement given by Mr. Brown?





What is the rule for this pattern?

0

8, 4, 2, 1, ...

0

What are the next two numbers in the pattern?

\$3

Kassandra was given the pattern below.

0

1, 4, 9, 16

Give the rule. Predict the next three numbers in the pattern.

\$3

0

0

Input	Output
10	18
20	38
30	58
40	78
50	98

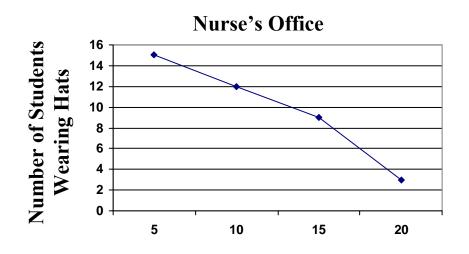
What is the rule? Make a table of 3 values using the same rule.

What happens to the input to get the output? If the input is 9, would the output be 28?

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()

Input	Output
2	7
3	10
4	13
5	16
6	19





What relationship do you see between the number of students that are sent to the nurse and the number of students that are wearing hats when the weather is cold?

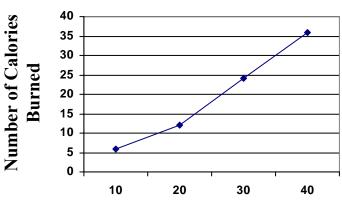
Number of Students Sent to the Nurse



0

0





Time Spent Exercising (in minutes)

According to the graph, what happens to the number of calories burned as the amount of time spent exercising increases?

\$3

Morris made the input-output table below.

0

Input	Output
3	18
4	24
5	30
6	36
7	42

If 12 is the input, what would the output be? Explain the rule you used to get your answer.

\$4 0 0	Write a problem to represent the following equation: $3m + 1 = t$	Louisa sold 4 more than twice the number of cookies that Daria sold. Write an expression to represent this problem.
\$4 0 0	Your aunt has asked you to mow her grass. She is going to pay you \$4 the first time you mow her lawn, \$8 the second time you mow, \$12 the third time and \$16 dollars the fourth time. If this pattern continues, how many times will you have to mow to make \$48 dollars? Explain the rule and how you got your answer.	
\$4 0 0	Mr. Miagi offers Karate lessons for \$25 a lesson. How many lessons would he have to do to earn at least \$150 dollars? Write an inequality, solve and graph the solution.	

\$4

U

Nolika was ordering t-shirts for the school. The t-shirt company showed her the chart below. The chart shows the discount that the school would get from ordering different numbers of t-shirts.

T-Shirts Ordered	10	20	30	40
Discount	\$0.06	\$0.12	\$0.18	\$0.24

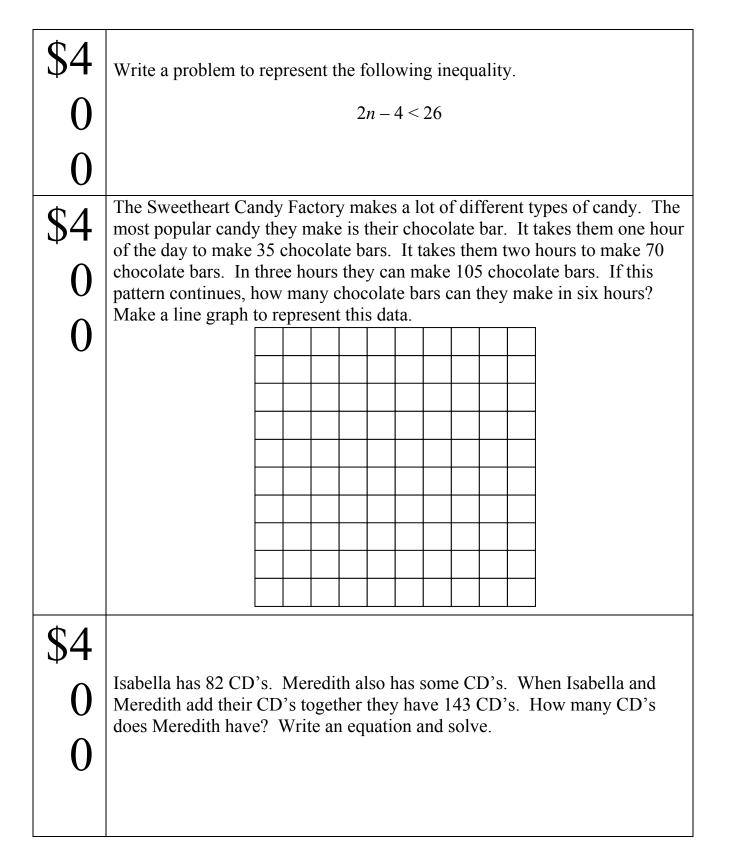
If this pattern continues, how much of a discount would Nolika get if she orders 800 t-shirts?

\$4

0

Zaria is selling magazine subscriptions. The chart shows how the number of magazine subscription orders increases over time. Zaria determined that she will have 60 magazine subscriptions at the end of twelve weeks if the rate of change stays the same. Is she correct? Explain your answer.

Week	# of
#	Magazine
#	Subscriptions
1	7
2	14
3	21
4	28



\$4

0

Roberto is collecting bugs. He made the table below to show the number of bugs he collected and the amount of time it took.

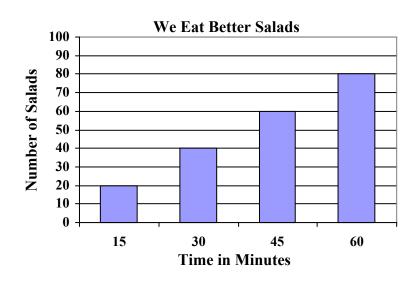
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Look at the data in the table. What happens to the amount of time it takes as the number of bugs collected increases? Write a rule for the pattern. How many bugs will be collected in 45 minutes?

Number of bugs	Amount of time
collected	it took to collect
	them
5	15 minutes
7	21 minutes
9	27 minutes
10	30 minutes

\$4

The manager at the We Eat Better Restaurant made the following graph showing how many salads they make in one hour. They have decided to improve their salads by adding 3 extra tomatoes to each salad. If the rate stays the same for the day, how many extra tomatoes will be used in an 8 hour day?



\$4 0 Callie washes windows to earn extra money. She keeps track of the amount of time it takes her to wash the windows in the table below.

0

Number of	Time spent
Windows	washing
	them
4	32 minutes
6	48 minutes
8	64 minutes

Her next door neighbor has 12 windows. How long will it take to wash her neighbors' windows? Write a rule to represent the pattern in the table.

\$1 0 0	Darrin added 3 to the product of a number and 4 and got 51. What was the number? The number was 12.	Solve $p - 18 \le 12$ $p \le 30$
\$1 0 0	Write an expression to show the following: nine more than three times a number $9 + 3n$ or $3n + 9$	Write the following as an inequality Twice a number plus 4 is greater than or equal to 6 $2n + 4 \ge 6$
\$1 0 0	Write an equation that represents the following sentence. Eighteen added to four times a number is one hundred eight. $18 + 4x = 108$ or $4x + 18 = 108$	Kasper had \$25. He bought a present for his mother that cost x dollars. He now has less than \$8 left. Write an inequality to represent this situation. $25 - x < 8$
\$1 0 0	Kamal does <i>j</i> number of jumping jacks each day. Write an expression to determine the number of jumping jacks he does in 5 days. 5 <i>j</i>	Solve $4m = 36$ m = 9

	1 atterns, 1	0110010	iib wii	4 1 11 E	,0010		
\$1 0 0	Draw what come	e next in	n this	patte	rn.		
\$1 0 0	Draw the 6 th terr	n in this	s patte	ern.		6	
	Write a rule for	the data	in th	e tabl	le.		
\$1		1	I	I	T .		
\bigcap	X	1	2	3	4		
U	У	6	7	8	9		
0	The rule is to add 5.						
\$1	What is the rule for the pattern listed below?						
0	15, 22, 29, 36,						
0	The rule is to a	dd 7.					

	1 atterns, 1 and tolls t	
\$2 0 0	Make a table with 3 values that follows this rule: $3m + 1$ Accept any table that follows the rule.	The principal is selling sweatshirts with the school colors for \$14. Write an equation to represent the number of sweatshirts (s) sold and the total amount (a)? 14s =ac
\$2 0 0	A bus holds 36 people. Three people can sit in each seat. Write an equation to determine the number of seats (s) a bus has.	Andrea has 4 times as many marbles in her collection as Katrina. If Katrina has 14 marbles, write an equation to find the number of marbles Andrea has. Solve the equation. $14 \cdot 4 = a$
	or $36 \div 3 = s$	a = 56
\$2 0 0	Hannah charges \$8.00 an hour to baby-sit. Last month she earned \$72. How many hours did she baby-sit? Write an equation to help you solve the problem where h , represents the number of hours. She baby-sat for 9 hours. $8h = 72$ or $72 \div 8 = h$	Brandon went to the store to buy cupcakes. Cupcakes come packaged in groups of six. Each package costs \$3.25. Brandon has \$13.00. Write an inequality to show the number of packages of cupcakes that Brandon can buy. \$3.25n \leq \$13.00
\$2 0 0	Corbin was picking apples for his uncle's grocery store. He picked a total of 274 apples. On the way to his uncle's store, he dropped some. If he gave his uncle a total of 221 apples, how many did he drop? Write an equation to help you solve the problem. $274 - a = 221$ $a = 53$	Write the following as an equation and solve: Seven less than a number is thirty- two $n-7=32$ $n=39$

\$2

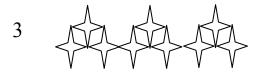
What comes next in the pattern below.

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2



Write a rule to go with this pattern.

The next term is



The rule is 3m.

\$2

Mr. Brown wrote the following statement on the board:

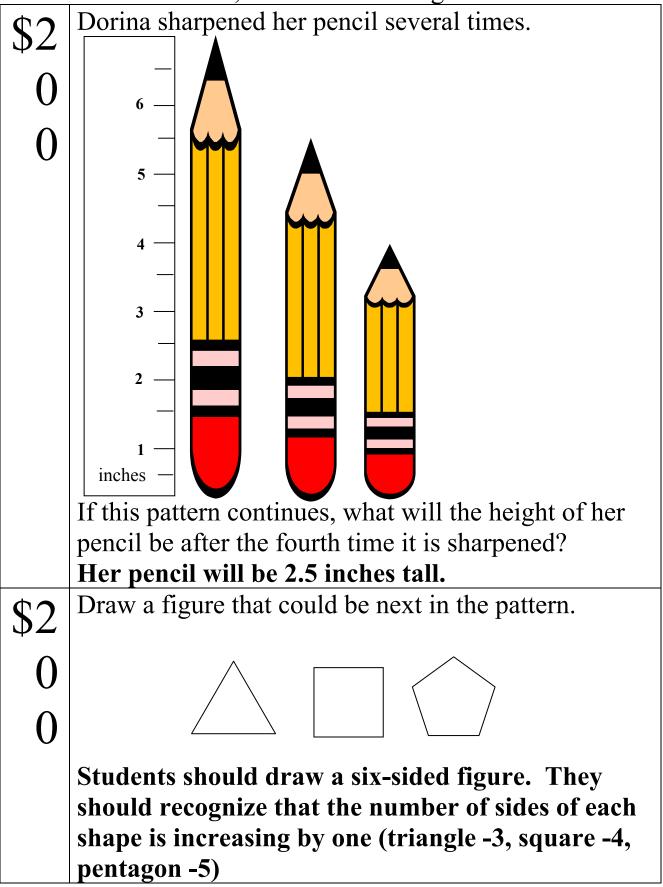
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0

Sixteen minus a number is equal to three less than five.

Chelsea wrote 16 - n = 5 - 3Eddie wrote n - 16 = 5 - 3

Which student wrote an equation that correctly represents the statement given by Mr. Brown? Chelsea wrote the equation correctly.



Nadine is painting pictures for her family's yard sale. It takes her 12 minutes to set up and mix all the paint. It takes her 6 minutes to paint each picture.

How many pictures would she be able to paint in 90 minutes?
Write an equation and solve.

$$12 + 6x = 90$$
$$6x = 78$$

$$x = 13$$

She can paint 13 pictures.

Kiera is buying graduation presents for her 3 cousins. She wants to spend \$24 or less. Kiera says she can spend \$6 on each cousin. Is she correct? Write an inequality to solve.

x < 8

She can spend less than \$8.00 per gift.

Bashira found some ladybugs at the park. Each ladybug had the same number of spots. She counted their spots and found that 7 ladybugs had a total of 42 spots. Write an equation and solve to determine the number of spots on 1 ladybug.

 $\begin{array}{c|c}
O & 7s = 42 \\
s = 6
\end{array}$

Derek ate 4 pieces of pizza. Preston ate 9 pieces of pizza. George ate some pieces of pizza. Together, Derek and George ate more pieces of pizza than Preston. How many pieces did Preston eat? Write an inequality and solve.

 $\begin{array}{c|c}
0 & 4+g>9 \\
g>5 \\
\text{George ate more than 5 pieces of pizza.}
\end{array}$

Kylee took her puppy to the vet in May. The puppy had gained 2 pounds. Six months later the puppy had gained $2\frac{1}{2}$ pounds more. The following May, he had gained 3 more pounds. How many pounds will he gain from November to May of next year if he continues to grow at the same rate?

He will gain 4 more pounds.

\$3 What is the rule for this pattern?

8, 4, 2, 1, ...

What are the next two numbers in the pattern?

Divide numbers in half. The next two numbers are $\frac{1}{2}$ and $\frac{1}{4}$.

\$3 Kassandra was given the pattern below.

 $\begin{array}{c|c} 1, 4, 9, 16 \end{array}$

O Give the rule. Predict the next three numbers in the pattern.

The next term times itself. $x \cdot x$ or x^2 The next three numbers are 25, 36, 49

\$3

 \cap

Input	Output
10	18
20	38
30	58
40	78
50	98

What is the rule? Make a table of 3 values using the same rule.

The rule is the input doubled minus two. 2x - 2 Accept any table that correctly follows the rule.

\$3

What happens to the input to get the output? If the input is 9, would the output be 28?

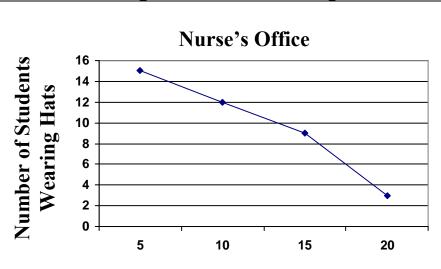
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Input	Output
2	7
3	10
4	13
5	16
6	19

3 times the input plus 1 equals the output Yes, if 9 is the input, 28 is the output

\$3

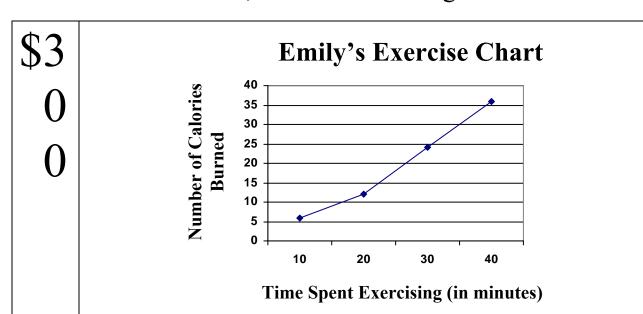
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Number of Students Sent to the Nurse

What relationship do you see between the number of students that are sent to the nurse and the number of students that are wearing hats when the weather is cold?

The number of students that are sent to the nurse decreases as the number of students wearing hats increases.



According to the graph, what happens to the number of calories burned as the amount of time spent exercising increases?

The amount of calories burned increases.

\$3

0

Morris made the input-output table below.

Input	Output
3	18
4	24
5	30
6	36
7	42

If 12 is the input, what would the output be? Explain the rule you used to get your answer.

If 12 is the input, the output is 72. The rule is to multiply the input by 6 to get the output.

\$4 0 0	Write a problem to represent the following equation: $3m + 1 = t$ Accept any problem that matches the equation.	Louisa sold 4 more than twice the number of cookies that Daria sold. Write an expression to represent this problem. 4 + 2x	
\$4 0 0	Your aunt has asked you to mow her grass. She is going to pay you \$4 the first time you mow her lawn, \$8 the second time you mow, \$12 the third time and \$16 dollars the fourth time. If this pattern continues, how many times will you have to mow to make \$48 dollars? Explain the rule and how you got your answer. You have to mow 12 times to earn \$48. Answers may vary. The rule is 4n. You multiply the number of times you mow by 4 to find out how much you will be paid. I can divide 48 by 4 to find my answer or I can say "what times 4 equals 48."		
\$4 0 0	Mr. Miagi offers Karate lessons for \$2 he have to do to earn at least \$150 doll graph the solution. $$25x \ge 150 $x \ge 6 \text{ lessons}$	ars? Write an inequality, solve and	

\$4 0

Nolika was ordering t-shirts for the school. The t-shirt company showed her the chart below. The chart shows the discount that the school would get from ordering different numbers of t-shirts.

T-Shirts Ordered	10	20	30	40
Discount	\$0.06	\$0.12	\$0.18	\$0.24

If this pattern continues, how much of a discount would Nolika get if she orders 800 t-shirts?

She would receive a discount of \$4.80.

\$4 0

()

Zaria is selling magazine subscriptions. The chart shows how the number of magazine subscription orders increases over time. Zaria determined that she will have 60 magazine subscriptions at the end of twelve weeks if the rate of change stays the same. Is she correct? Explain your answer.

Week #	# of Magazine Subscriptions
1	7
2	14
3	21
4	28

Zaria is not correct. She will have 84 magazine subscriptions at the end of twelve weeks. The pattern is to multiply the number of weeks by 7 to determine the number of subscriptions sold.

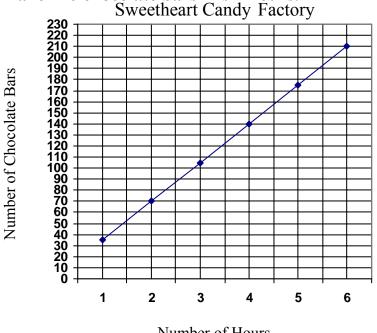
Write a problem to represent the following inequality.

$$2n - 4 < 26$$

Accept any problem that matches the inequality.

The Sweetheart Candy Factory makes a lot of different types of candy. The most popular candy they make is their chocolate bar. It takes them one hour of the day to make 35 chocolate bars. It takes them two hours to make 70 chocolate bars. In three hours they can make 105 chocolate bars. If this pattern continues, how many chocolate bars can they make in six hours? Make a line graph to represent this data.

They can make 210 chocolate bars in six hours.
Sweetheart Candy Factory



Number of Hours

Isabella has 82 CD's. Meredith also has some CD's. When Isabella and Meredith add their CD's together they have 143 CD's. How many CD's does Meredith have? Write an equation and solve.

$$82 + m = 143$$

 $m = 61$

\$4

Roberto is collecting bugs. He made the table below to show the number of bugs he collected and the amount of time it took.

Λ

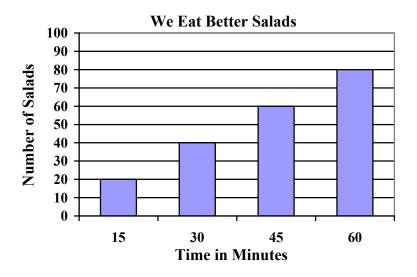
Look at the data in the table. What happens to the amount of time it takes as the number of bugs collected increases? Write a rule for the pattern. How many bugs will be collected in 45 minutes?

Number of bugs	Amount of time
collected	it took to collect
	them
5	15 minutes
7	21 minutes
9	27 minutes
10	30 minutes

As the number of bugs collected increases, the time increases. The pattern used is to multiply the number of bugs collected by 3 to determine the amount of time it takes. In 45 minutes, 15 bugs will have been collected.

\$4

The manager at the We Eat Better Restaurant made the following graph showing how many salads they make in one hour. They have decided to improve their salads by adding 3 extra tomatoes to each salad. If the rate stays the same for the day, how many extra tomatoes will be used in an 8 hour day?



They will use 1,920 extra tomatoes in a day. Student explanations my vary, but should include that 80 salads are made each hour. There will be 640 salads made during an 8 hour day. If there are three extra tomatoes in each salad, there will be 1,920 extra tomatoes. $(640 \times 3 = 1,920)$

\$4 ^

Callie washes windows to earn extra money. She keeps track of the amount of time it takes her to wash the windows in the table below.

Number of	Time spent
Windows	washing
	them
4	32 minutes
6	48 minutes
8	64 minutes

Her next door neighbor has 12 windows. How long will it take to wash her neighbors' windows? Write a rule to represent the pattern in the table.

It will take her 96 minutes (or 1 hour and 36 minutes) to wash 12 windows. The rule is to multiply the number of windows by 8. (8x)

Math Jeopardy Data Analysis and Probability

\$1 0 0	Jaden has a bag of cookies. In the bag, there are 4 chocolate chip, 8 oatmeal, 6 peanut butter and 2 sugar cookies. If Jaden reaches into the bag without looking and picks a cookie, what is the probability that it will be chocolate chip?	There are an equal number of red, green, blue, and yellow marbles in a bag. What is the probability of selecting a blue marble?
\$1 0 0	What is the mode of the numbers in the data set? 6, 8, 4, 10, 4, 6, 3, 7, 4	What is the range of the numbers? 24, 23, 38, 37, 42, 56, 21, 33, 48
\$1 0 0	What is the probability that Raul will either flip heads or tails when he tosses a coin?	Explain how to find the mean of the numbers below. 23, 32, 35, 21, 33, 20, 25

\$1 Manuel tracked the number of points he earned in each basketball game during the season. His results ()are listed on the table below. () 1 3 5 Game 6 Number 12 12 9 10 4 of points

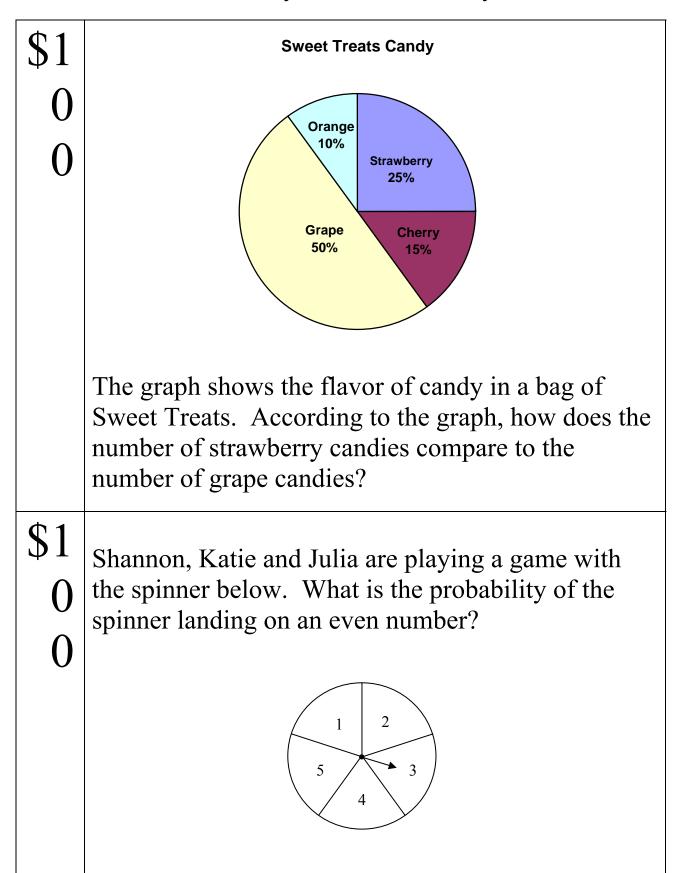
Manuel says that the median number of points he scored is 6, is he correct? Why or why not?

\$1 Marianne wrote the letters of her name on cards and placed them in a bag.

M A R I A N E

She is going to reach into the bag and pick a card without looking. What is the probability that she will select an A?

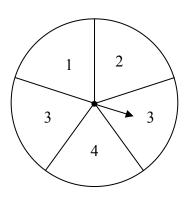
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If you spin the spinner below, what is the probability that you will spin a three?





\$1

0

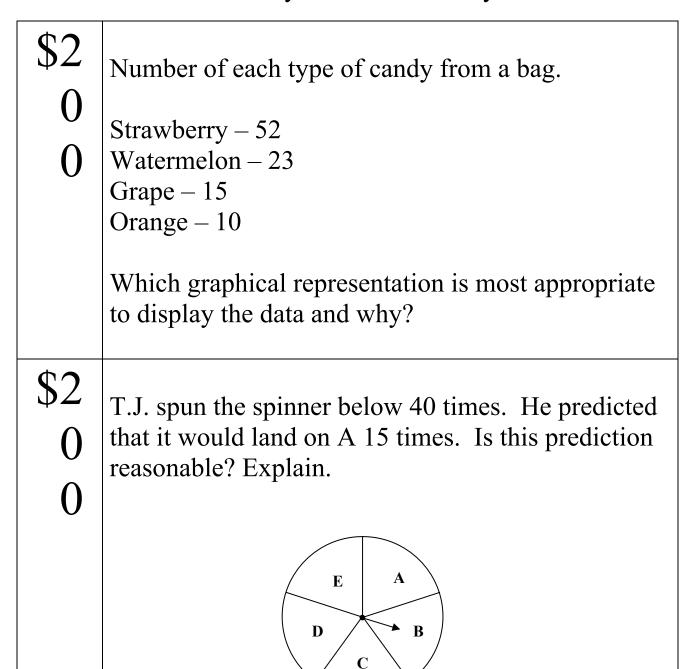
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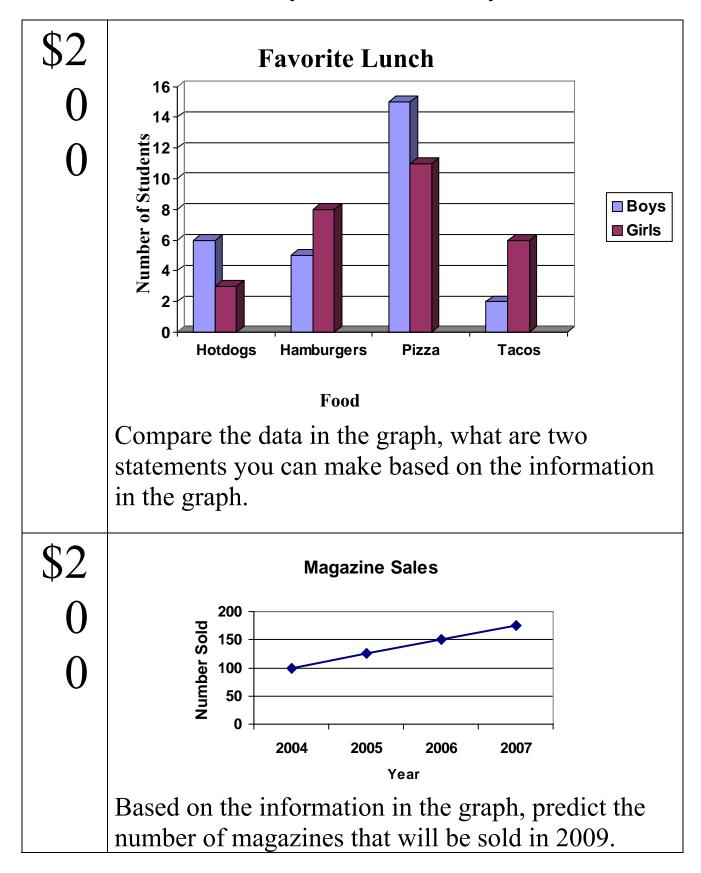
Tori recorded the number of miles she rode her bike for a week in the table below.

Day	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.
# of miles	8.4	3.2	10.6	5.0	4.3	6.1	3.4

What is the range of her data?

	Data Analysis a	ina riobability
\$2 0 0	Kerri received the following scores on her spelling tests this week: 95, 100, 87, 93, 82, 75, 97, 95, 88 What is the range of the data? What does the range tell you about the data set?	Lorna is flipping a coin. She flipped the coin 30 times. It landed on heads 21 times and tails 9 times. Theoretically, how many times should the coin have landed on heads?
\$2 0 0	You have a set of cards numbered 1 to 12. What is the probability of selecting a number that is four or greater? Name the probability as a percent.	Meeka is going to roll two number cubes. What is the probability that when she rolls the number cubes the sum of the numbers rolled will be more than 6?
\$2 0 0	Marion flipped a coin 20 times. The coin landed on heads 18 times and tails 2 times. What is the probability that when Marion flips his coin again, it will land on heads?	Kariana has a pink sweater, a purple sweater and a white sweater; black paints and brown pants in her closet. If Kariana reaches into her closet and pulls out a sweater and pants, what is the probability that she pulls out a purple sweater and brown pants?
\$2 0 0	Draw a spinner that shows the probability of spinning a blue to be $\frac{2}{5}$.	Lulu has a set of cards numbered from 1 to 20. If she reaches into her bag and selects a card, what is the probability that she will select a prime number?





	Data Allalysis	and ribbability
\$3 0 0	Carly has a spinner that has a probability of $\frac{1}{3}$ for landing on purple. Sonny has a bag of marbles and the probability of pulling a purple marble is 20%. Which event is more likely to happen?	Daria had a cup filled with straws. There were 20 pink straws, 5 blue straws and 5 yellow straws. She reached into the cup and pulled out a straw without looking. She recorded the color of the straw and placed it back in the cup. The results after 60 pulls are listed below. Pink – 30 Blue – 10 Yellow – 20 How do these results compare to the theoretical probability?
\$3 0 0	Terry and Jay were comparing their spelling grades. Terry's grades were 73, 88, 94, 90, 85 Jay's grades were 87, 61, 99, 100, 73 Which boy has the higher average?	The Rocking Robins bowling team received the following scores in their last game: 162, 177, 190, 181, 195 What is the mean, median and range for their bowling scores?
\$3 0 0	Wendell and Armando were given the set of numbers below. 10, 7, 5, 0, 5, 8, 7 Wendell said the mean of the data set was 6. Armando said the mean of the data set was 7. Which student is correct and why?	LeRhonda went to the Maple Leaf diner to order lunch. She had a choice of a cheeseburger, a hotdog and a slice of pizza. She could pick milk, water, or juice to drink. What are all the possible food and drink combinations?
\$3 0 0	following colors: blue, red, or bla	cell phones. They can select from the ack. They can select an extra battery, er. How many choices are possible?

\$3

The fifth grade students took a poll to see which sport the students in their class liked best.

0

Which sport did about 25% of the students pick?

Which sport does about $\frac{1}{3}$ of the students like?

Favorite Sports



\$3

Jordan was selling candy bars for her school. The list below shows the number of candy bars she sells during the week.

Monday - 8

Tuesday – 6

Wednesday - 0

Thursday – 16

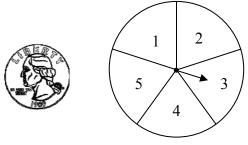
Friday - 10

What is the mean number of candy bars she sold during the week?

Carson was playing a game. He had to toss bean bags into this shape on the ground. What is the probability that the bean bag he tosses will land on a shaded area? Write the probability as a percent



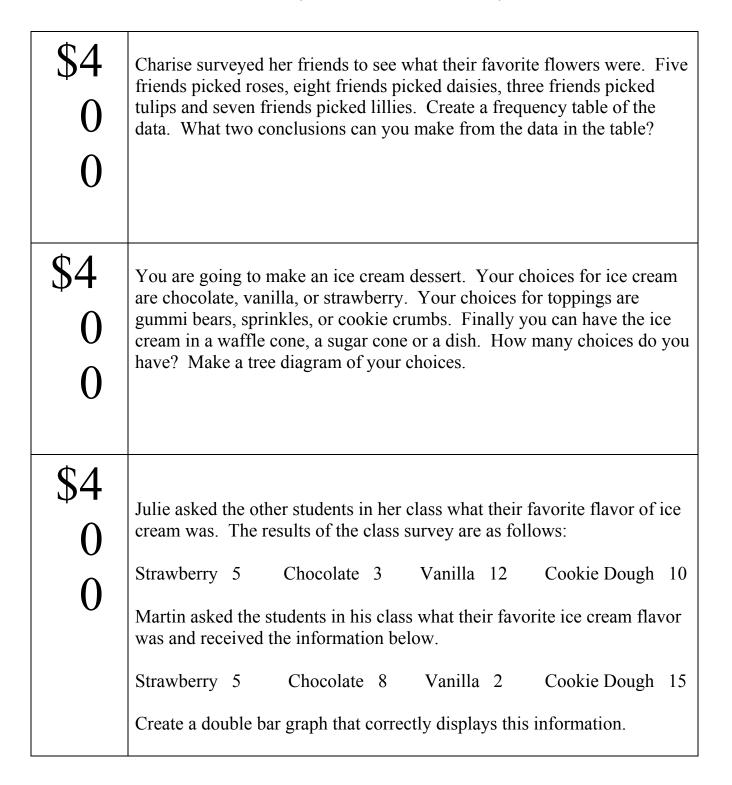
Gabe is flipping a coin and spinning the spinner below. What are all the possible outcomes?

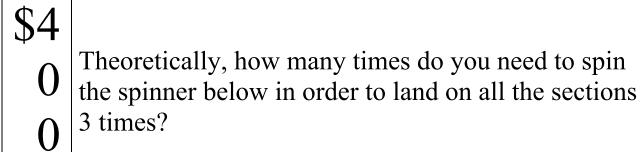


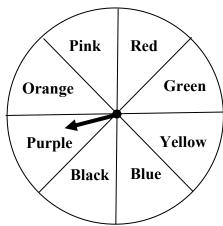
Becky rolled a number cube 60 times. She made the tally chart below to show her results.

Numbers Rolled Number 1 2 3 5 6 4 **Tally** MM MM MM $\mathbb{H}\mathbb{H}\mathbb{H}$ \mathbb{M} MII \mathbb{M}

How do the results for rolling a 1 compare to the theoretical probability for rolling a 1?





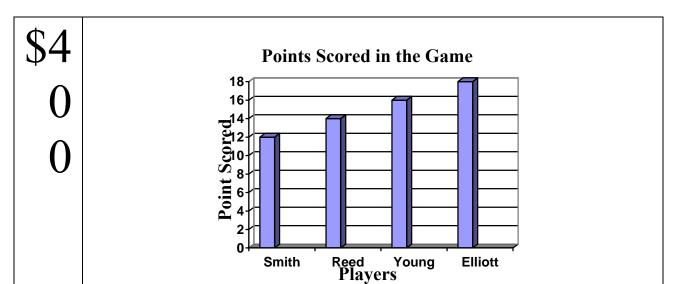


\$4

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Organize the set of data on a line plot. Determine the mode of the data set.

(2, 1, 3, 0, 5, 5, 3, 0, 3, 7, 3, 5)



What is the mean number of points scored by these 4 players?

\$4

Each student in Mrs. Robinson's class was growing a plant. The students recorded the height of their plants in the chart below.

Student	Plant Size
Marquise	10 in.
Annabelle	7 in.
Juan	12 in.
Fernando	7 in.

What is the mean, mode, and range of the plants in Mrs. Robinson's class?

\$4

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Mr. Lewis asked the students in the fifth grade to chart the number of books they read during the month. He created a table to show the number of books read by the boys and by the girls.

Gi	Girls				
Number	Number	Number			
of	of	of			
Books	Students	Students			
Read					
3	1	5			
4	3	7			
5	4	14			
6	10	3			
7	8	3			
8	5	5			

Use the information in the table to create a double bar graph.

For his science fair project, Jared is taking the temperature in degrees Fahrenheit every hour during the school day. Make a line graph using the data below to show the temperature changes he recorded on Tuesday.

8:30	57°
9:30	59°
10:30	63°
11:30	68°
12:30	72°
1:30	72°
2:30	71°

3:30

70°

The table shows the results of 100 spins on the spinner.

Spinner Test						
Color	Number of Times					
red	50					
blue	25					
yellow	15					
green	10					

You spin the spinner 50 more times. It lands on red half the time and on blue, green, or yellow the other times. How would the data on the table change for red? What would happen to the section for red on the circle graph?

\$4

Rashawn is training for a marathon. He kept track of the total number of miles that he ran each week during the first 6 weeks of his training.

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Week	1	2	3	4	5	6
Total Miles	15.5	18.2	18.8	19	20.5	20.2

Find the mean (average) number of miles he ran each week during this 6 week period. Explain your answer.

\$4

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Television Shows Watched in a Week

	Number of Television Shows
Name	Watched Each
	Night
Nadiyo	5, 4, 2, 1
Emilee	0, 2, 1, 1
Darius	6, 4, 4, 2

Write a statement that compares the means for the number of television shows watched each night for the three students in the table.

\$1 0 0	Jaden has a bag of cookies. In the bag, there are 4 chocolate chip, 8 oatmeal, 6 peanut butter and 2 sugar cookies. If Jaden reaches into the bag without looking and picks a cookie, what is the probability that it will be chocolate chip? She has a 4 out of 20 (or 1 out of 5) probability to pick a chocolate chip cookie.	There are an equal number of red, green, blue, and yellow marbles in a bag. What is the probability of selecting a blue marble? The probability of selecting a blue marble is 1 out of 4.
\$1 0 0	What is the mode of the numbers in the data set below? 6, 8, 4, 10, 4, 6, 3, 7, 4 The mode is 4.	What is the range of the numbers below? 24, 23, 38, 37, 42, 56, 21, 33, 48 The range is 35.
\$1 0 0	What is the probability that Raul will either flip heads or tails when he tosses a coin? The probability of flipping either heads or tails is 1.	Explain how to find the mean of the numbers below. 23, 32, 35, 21, 33, 20, 25 Add all of the numbers together and divide by 7 because there are seven numbers.

\$1 0

Manuel tracked the number of points he earned in each basketball game during the season. His results are listed on the table below.

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Game	1	2	3	4	5	6	7
Number	12	8	10	6	12	4	9
of points							

Manuel says that the median number of points he scored is 6, is he correct? Why or why not?

No, the median number is 9. You have to put the numbers in order from least to greatest before you can determine the median. 4, 6, 8, 9, 10, 12, 12

\$1 0

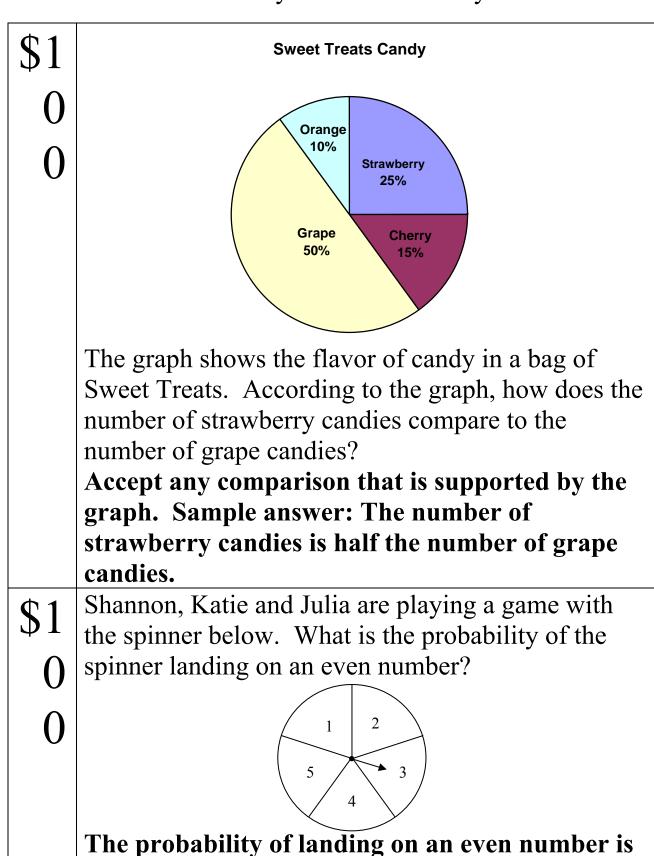
Marianne wrote the letters of her name on cards and placed them in a bag.

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M A R I A N E

She is going to reach into the bag and pick a card without looking. What is the probability that she will select an A?

The probability that she will select an A is 2 out of 8 (or 1 out of 4).

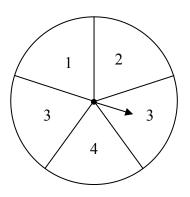


2 out of 5.

\$1 0

If you spin the spinner below, what is the probability that you will spin a three?

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The probability that you will spin a three is 2 out of 5.

\$1

Tori recorded the number of miles she rode her bike for a week in the table below.

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Day	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.
# of miles	8.4	3.2	10.6	5.0	4.3	6.1	3.4

What is the range of her data? **The range is 7.4.**

	Data Alialysis aliu	i iodadility
\$2 0 0	Kerri received the following scores on her spelling tests this week: 95, 100, 87, 93, 82, 75, 97, 95, 88 What is the range of the data? What does the range tell you about the data set? The range is 25. The range tells you the difference between the highest and lowest number in the data set.	Lorna is flipping a coin. She flipped the coin 30 times. It landed on heads 21 times and tails 9 times. Theoretically, how many times should the coin have landed on heads? It should have landed on heads 15 times.
\$2 0 0	You have a set of cards numbered 1 to 12. What is the probability of selecting a number that is four or greater? Name the probability as a percent. 75%	Meeka is going to roll two number cubes. What is the probability that when she rolls the number cubes the sum of the numbers rolled will be more than 6? There are 36 possible outcomes when you roll 2 dice. 21 of the 36 outcomes have a sum greater than 6. The probability is 7 out of 12.
\$2 0 0	Marion flipped a coin 20 times. The coin landed on heads 18 times and tails 2 times. What is the probability that when Marion flips his coin again, it will land on heads? The probability of landing on heads is 1 out of 2.	Kariana has a pink sweater, a purple sweater and a white sweater; black paints and brown pants in her closet. If Kariana reaches into her closet and pulls out a sweater and pants, what is the probability that she pulls out a purple sweater and brown pants? The probability is 1 out of 6.
\$2 0 0	Draw a spinner that shows the probability of spinning a blue to be $\frac{2}{5}$. Accept a spinner that is correctly drawn to show $\frac{2}{5}$ blue.	Lulu has a set of cards numbered from 1 to 20. If she reaches into her bag and selects a card, what is the probability that she will select a prime number? The probability of selecting a prime number is $\frac{8}{20}$ or $\frac{2}{5}$.

\$2

Number of each type of candy from a bag.

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Strawberry – 52

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Watermelon – 23

Grape - 15

Orange - 10

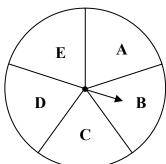
Which graphical representation is most appropriate to display the data and why?

A circle graph is best because each color represents part of the whole.

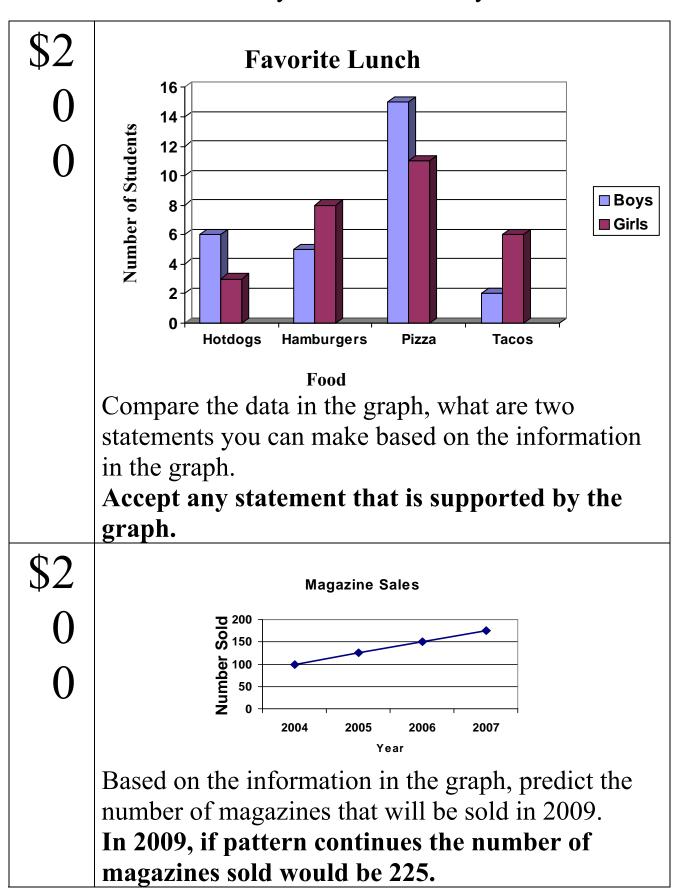
\$2

T.J. spun the spinner below 40 times. He predicted that it would land on A 15 times. Is this prediction reasonable? Explain.

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The prediction is not reasonable. The probability of landing on A is 1 out of 5. If you spin the spinner 40 times, theoretically it will land on A 8 times.



\$3 0 0	Carly has a spinner that has a probability of $\frac{1}{3}$ for landing on purple. Sonny has a bag of marbles and the probability of pulling a purple marble is 20%. Which event is more likely to happen? Spinning purple on Carly's spinner is more likely to occur than pulling a purple marble from Sonny's bag of marbles.	Daria had a cup filled with straws. There were 20 pink straws, 5 blue straws and 5 yellow straws. She reached into the cup and pulled out a straw without looking. She recorded the color of the straw and placed it back in the cup. After 60 pulls she pulled 30 pink straws. How does that compare to the theoretical probability of pulling a pink straw? Theoretically she should have pulled 40 pink straws. She pulled 10 less pink than theoretically she should have.		
\$3 0	Terry and Jay were comparing their spelling grades. Terry's grades were 73, 88, 94, 90, 85	The Rocking Robins bowling team received the following scores in their last game: 162, 177, 190, 181, 195		
0	Jay's grades were 87, 61, 99, 100, 73 Which boy has the higher average? Terry's mean is 86 Jay's mean is 84 Terry has the higher average.	What is the mean, median and range for their bowling scores? The mean is 181. The median is 181. The range is 33.		
\$3	Wendell and Armando were given the set of numbers below. 10, 7, 5, 0, 5, 8, 7 Wendell said the mean of the data set was 6. Armando said the mean of the data set was 7. Which student is correct and why?	LeRhonda went to the Maple Leaf diner to order lunch. She had a choice of a cheeseburger, a hotdog and a slice of pizza. She could pick milk, water, or juice to drink. What are all the possible food and drink combinations?		
0	Wendell is correct. The total for the data set is 42. There are 7 numbers in the data set. Even though one of the numbers is 0 it still is part of the data set. $42 \div 7 =$ 6.	cb - m cb - w cb - j hd-m hd-w hd - j p - m p - w p - j There are 9 possible outcomes.		
\$3 0 0	Jarrod and Thad are getting new cell phones. They can select from the following colors: blue, red, or black. They can select an extra battery, headphones or a cell phone holder. How many choices are possible? There are 9 outcomes.			

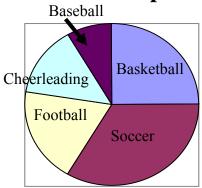
The fifth grade students took a poll to see which sport the students in their class liked best.

O Which sport did about 25% of the students pick?

Basketball

Which sport does about $\frac{1}{3}$ of the students like?

Soccer Favorite Sports



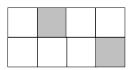
- Jordan was selling candy bars for her school. The list below shows the number of candy bars she sells during the week.
 - Monday 8
 - $\begin{array}{|c|c|c|c|}
 \hline
 & Tuesday 6 \\
 & Wednesday 0
 \end{array}$

Thursday – 16

Friday - 10

What is the mean number of candy bars she sold during the week? **The mean is 8.**

Carson was playing a game. He had to toss bean bags \$3 into this shape on the ground. What is the probability that the bean bag he tosses will land on a shaded area? Write the probability as a percent



The probability is $\frac{2}{8}$ or $\frac{1}{4}$. The probability is 25%

Gabe is flipping a coin and spinning the spinner below. What are all the possible outcomes?





$$-\mathbf{h} \qquad \mathbf{4} - \mathbf{h}$$

 $1-h \qquad 2-h \qquad 3-h$ 1-t 2-t 3-t

4-t

5 - h5-t

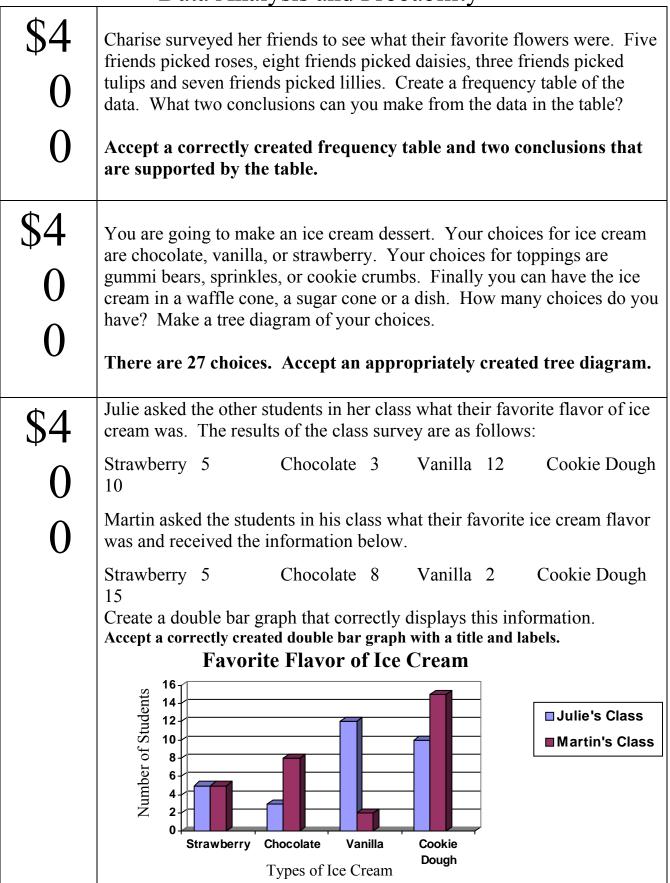
There are 10 outcomes.

Becky rolled a number cube 60 times. She made the tally chart below to show her results.

Numbers Rolled

Number	1	2	3	4	5	6
Tally		$\mathbb{H}\mathbb{H}$	$\not\equiv$	JH 11	\mathbb{H}	M M

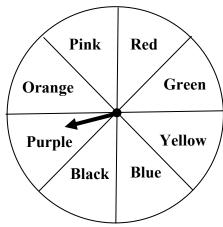
How do the results for rolling a 1 compare to the theoretical probability for rolling a 1? Theoretically each number should have been rolled 10 times. The number 1 was rolled 3 more times than it theoretically should have been.



\$4

Theoretically, how many times do you need to spin the spinner below in order to land on all the sections 3 times?

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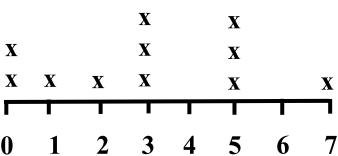


Theoretically you would need to spin 24 times.

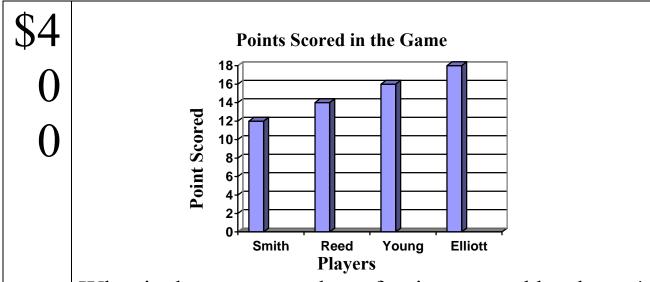
\$4

Organize the set of data on a line plot. Determine the mode of the data set.

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The mode is 3.



What is the mean number of points scored by these 4 players? **The mean is 15 points scored.**

\$4

Each student in Mrs. Robinson's class was growing a plant. The students recorded the height of their plants in the chart below.

Student	Plant Size
Marquise	10 in.
Annabelle	7 in.
Juan	12 in.
Fernando	7 in.

What is the mean, mode, and range of the plants in Mrs. Robinson's class?

The mean is 9. The mode is 7. The range is 5.

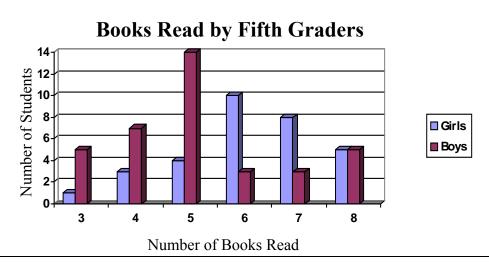
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Mr. Lewis asked the students in the fifth grade to chart the number of books they read during the month. He created a table to show the number of books read by the boys and by the girls.

G	Boys	
Number of	Number of	Number of
Books	Students	Students
Read		
3	1	5
4	3	7
5	4	14
6	10	3
7	8	3
8	5	5

Use the information in the table to create a double bar graph.

Accept a correctly created double bar graph with a title and labels.



\$4

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For his science fair project, Jared is taking the temperature in degrees Fahrenheit every hour during the school day. Make a line graph using the data below to show the temperature changes he recorded on Tuesday.

		Hourly Temperatures for Tuesday
8:30	57°	90°
9:30	57° 59°	
10:30	63°	80°
11:30	68°	70°
12:30	72°	70
1:30	72°	60°
2:30	71°	50°
3:30	70°	00
		8:30 9:30 10:30 11:30 12:30 2:30 3:30
		Time

Accept a correctly created graph with a title and labels.

\$4

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The table shows the results of 100 spins on the spinner.

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Spinner Test			
Color	Number of Times		
red	50		
blue	25		
yellow	15		
green	10		

You spin the spinner 50 more times. It lands on red half the time and on blue, green, or yellow the other times. How would the data on the table change for red? What would happen to the section for red on the circle graph?

The data in the table would go from 50 to 75. The red section on the graph will stay the same because half of the circle is already red and it landed on red half of the time.

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Rashawn is training for a marathon. He kept track of the total number of miles that he ran each week during the first 6 weeks of his training.

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Week	1	2	3	4	5	6
Total Miles	15.5	18.2	18.8	19	20.5	20.2

Find the mean (average) number of miles he ran each week during this 6 week period. Explain your answer.

18.7 is the average. I added all the numbers together and divided by 6.

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Television Shows Watched in a Week

Name	Number of Television Shows Watched Each Night
Nadiyo	5, 4, 2, 1
Emilee	0, 2, 1, 1
Darius	6, 4, 4, 2

Give the mean for each student. Write a statement that compares the means for the number of television shows watched each night for the three students in the table. Accept responses that correctly compare the means.

On average Emilee watches the fewest number of shows each evening. Nadiyo's mean is 3. Emilee's mean is 1.

Darius's mean is 4. On average Darius watches the most number of television shows each evening.