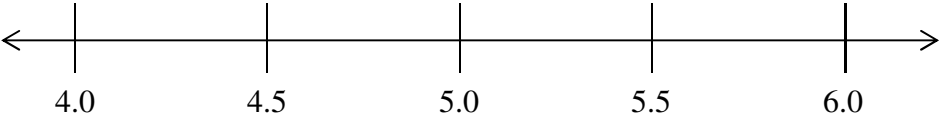


1.	<p>Mr. Quintana used the elevator to make deliveries on different floors of an office building. He entered the elevator, rode up 4 floors, rode down 2 floors, rode up 6 floors, and then rode down 1 floor, where he made his last delivery.</p> <p>Which expression can be used to find the floor on which Mr. Quintana made his last delivery?</p> <p>A. $4-2+6-1$ C. $1-4-2+6-1$ B. $4+2-6+1$ D. $4+2+6+1$</p>													
2.	<p>The low temperature on Saturday was 10 degrees below zero Celsius. On Sunday, the low temperature was 30 degrees above zero Celsius. What integer represents the low temperature on Saturday in degrees Celsius?</p>													
3.	<p>Acorn woodpeckers live in families. The family members collect acorns and store them in the trunks of trees. The table below shows information about the number of acorns collected and eaten by a family of woodpeckers on 3 days. Which expression best describes the information in the table if the family had stored 428 acorns before Monday?</p> <table border="1" data-bbox="505 909 972 1161" style="margin-left: auto; margin-right: auto;"> <caption>Acorns Collected and Eaten</caption> <thead> <tr> <th>Day</th> <th>Number Collected</th> <th>Number Eaten</th> </tr> </thead> <tbody> <tr> <td>Monday</td> <td>23</td> <td>8</td> </tr> <tr> <td>Tuesday</td> <td>29</td> <td>10</td> </tr> <tr> <td>Wednesday</td> <td>42</td> <td>9</td> </tr> </tbody> </table> <p>A. $428-23+8-29+10-42+9$ C. $23-8+29-10+42-9-428$ B. $428+23-8+29-10+42-9$ D. $23+8-29+10-42+9+428$</p>	Day	Number Collected	Number Eaten	Monday	23	8	Tuesday	29	10	Wednesday	42	9	
Day	Number Collected	Number Eaten												
Monday	23	8												
Tuesday	29	10												
Wednesday	42	9												
4.	<p>Write an integer for each situation below.</p> <ol style="list-style-type: none"> 1. A gain of 6 pounds 2. A deposit of \$15 3. You scored 10 points 4. Five years ago 5. Two kilometers below the surface of the water 6. Six feet below sea level 7. Fifteen seconds before blastoff 8. A withdrawal of \$14 9. A debt of \$12 10. A gain of nine yards 													

1.	Mr. Mangham had 682 brain cells at the beginning of the school day. By the end of the day his brain cells had dropped to 257. How many brain cells did he lose during the day?	
2.	Harry Potter found 1244 jelly beans in his room at Hogwarts. He split them up into 9 equal groups to give to friends. How many jelly beans were in each group?	
3.	Scooby-Doo loves Scooby snacks. He eats 16 snacks every TV episode. If there are a total of 254 Scooby-Doo episodes, how many total snacks does he eat?	
4.	Mr. Underwood does not like UT. His students surprised him and gave him 2342 UT stickers for his birthday. By the end of the day he was able to give 898 stickers away. How many did he still have left?	
5.	You go shopping and buy 8 pens at \$2 each, 4 notebooks at \$6 each and a book for \$17. If you give the cashier \$100, how much change do you get back?	
6.	A private movie theater has the seats arranged in the shape of a square. There are 6 rows with 6 seats each. Draw a picture below to represent the seating arrangement and determine the total number of seats. Write your answer using an exponent and as a normal whole number.	
7.	Mrs. Atkins reads books that have an average of 496 pages. If she read 11 books last month, which of the following is the best estimate of the number of pages she read? A. 600 pages B. 4000 pages C. 5000 pages D. 50 pages	

8.	Mrs. Landry decided to count the ants crawling across her room. There were a total of 572 ants. The next day she counted 54 less ants. How many ants were there on day 2?	
9.	There are 19 secret rooms at DIS. In each of these secret rooms there are 289 Hershey bars. How many total Hershey bars are there?	
10.	Katniss and Tris decided to team up and go save the world. Their trip lasted 1791 days and they visited 9 different countries. If each visit lasted the same amount of time, how many days did they spend in each country?	
11.	Mr. Wright collects purple and orange Skittles in his spare time. He has a total of 1187 Skittles and 514 of them are orange. How many are purple?	
12.	You go shopping and buy 3 pens at \$1 each, 2 notebooks at \$2 each and a book for \$7. If you give the cashier \$20, how much change do you get back?	
13.	A classroom has 7 rows of desks with 7 desks in each row. How many desks are in the classroom?	
14.	There are 296 marshmallows in one bag. If Mrs. Fauatea buys 21 bags to throw at her students, which of the following is the best estimate of the number of marshmallows her students will be cleaning up off the floor? A. 15 marshmallows B. 280 marshmallows C. 4000 marshmallows D. 6000 marshmallows	

1.	Mrs. Shabanaj loves spinach. She buys 5.2 pounds of spinach Monday, 6.3 pounds of spinach on Tuesday, and 3.8 pounds of spinach on Wednesday. If her goal is to buy 30 pounds of spinach, how many more pounds does she need to buy?	
2.	Gas prices at four local stations were: \$3.599, \$3.649, \$3.469, and \$3.559. Write the prices in order from least to greatest.	L G
3.	Mr. Wright built a tower in Minecraft that was 147.62 feet tall. Mr. Mangham built a tower that was 168.355 feet tall. What is the combined height of the two towers?	
4.	Batting averages are rounded to the nearest thousandths. In 2012, Joe Mauer, catcher for the Minnesota Twins, had a batting average of 0.2876. How will his 2012 batting average be listed on his baseball card if it is rounded to the nearest thousandth?	
5.	<p>Mr. Mangham (M) ran 4.12 miles. Mrs. Atkins (A) ran 5.46 miles. Mrs. Fauatea (F) ran 5.099 miles. Mr. Underwood (U) ran 4.6 miles. Place the letter of each teacher in the appropriate place on the number line below.</p> 	
6.	You are exercising on a treadmill. You walk for 2.2 miles, jog for 3.2 miles, and walk for another 1.9 mile. Your goal is to walk or jog for a total of 10 miles. How much further must you walk or jog?	
7.	The batting averages of four players on a baseball team are: 0.298, 0.336, 0.283, 0.332. Write the batting averages in order from greatest to least.	G L
8.	Ms. Anderson had a piece of wood that was 16.799 inches and she bought and additional 8.08 inches. How much wood does she have altogether?	
9.	Batting averages are rounded to the nearest thousandths. In 1996, Mike Stanley, catcher for the Boston Red Sox, had a batting average of 0.2695. How will his 1996 batting average be listed on his baseball card if it is rounded to the nearest thousandth?	

10. Mr. Mangham (M) ran 4.82 miles. Mrs. Atkins (A) ran 5.09 miles. Mrs. Fauatea (F) ran 4.36 miles. Mr. Underwood (U) ran 5.61 miles. Place the letter of each teacher in the appropriate place on the number line below.

Solve.

11.	$27.06 + 7.06$		12.	$11.74 - 2.38$	
13.	$21.2 - 4$		14.	$39.2 - 32.81$	
15.	$9.14 + 0.8$		16.	$425 + 6.39 - 0.05$	

Round each number to the underlined place value.

17.	$1.\underline{7}26$		18.	$80.\underline{6}59$	
19.	$758.\underline{5}9$		20.	$27.\underline{4}9$	

1.	In some fantasy football leagues people don't round their scores to whole numbers, but keep their scores with decimals. One week Mrs. Landry scored 152.7 points, Mrs. Fauatea scored 152.38 points, and Mr. Underwood scored 152.099 points. Which teacher had the highest score that week?	
2.	The DIS teachers all went to the Lady Gaga concert together. Mr. Mangham paid \$6 more for his concert ticket than Dr. Giffin. If Mr. Mangham paid \$124.87, how much did Dr. Giffin pay?	
3.	Olivia, Delaney, Kylie, and Claire each pitched in \$8.35 to pay for a new iPhone case to give as a birthday present. Not including tax, what was the cost of the case? A. \$12.35 C. \$32.40 B. \$33.40 D. \$28.20	
4.	Drew went to swimming at the beach. The water temperature was 75 degrees and the air temperature was 91 degrees. He swam for 6.08 miles before lunch, 12.86 miles after lunch, and two times around the 5.12 mile loop after dinner. Estimate Drew's total swim distance. A. 166 miles C. 24 miles B. 23 miles D. 29 miles	
5.	The five members of One Direction decided to sit down together to write the best song ever. Their fans had already submitted 26 ideas for the song. Each member then brainstormed 14 additional ideas for the song. After deciding to eliminate 32 of the suggestions, their producer then divided the list into four equal groups: Best Songs Ever, Good Songs, Not Very Good Songs, and Worst Songs Ever. This expression represents the number songs in each list: $(26 + 5 \cdot 14 - 32) \div 4$ How many songs were on each list?	
6.	12^2 A. The answer is 14 because $12 + 2 = 14$. B. The answer is 24 because $12 \cdot 2 = 24$. C. The answer is 144 because $12 \cdot 12 = 144$. D. The answer is 6 because $12 \div 2 = 6$.	
7.	You spend \$13.41 for 6 pounds of banana pudding. Divide to find the cost per pound, rounded to the nearest cent.	

8.	<p>Mrs. Fauatea wants to paint her entire room Oklahoma State orange. She determines that it will take her 1.4 hours for each can of paint that she uses. After using 8.1 cans of paint she is finally finished. How long did it take her to paint her room?</p> <p>A. 9.5 hours C. 113.40 hours B. 95 hours D. 11.34 hours</p>	
9.	<p>Mr. Mangham makes \$17.50 per hour producing commercials for GEICO. To create the Hump Day commercial he worked 40 hours a week for 3.5 weeks. How much money did Mr. Mangham earn?</p>	
10.	<p>Mrs. Gilbreth loves to play sports. She bought three basketballs at \$14.95 each, five volleyballs at \$24.95 each, and a softball for \$11.05. Using estimation, about how much did she spend in all?</p> <p>A. \$49.00 C. \$173.00 B. \$51.00 D. \$181.00</p>	
11.	<p>Michael went to the library to get some information about bees for a project. He was looking for books with the call numbers 638.178 and 638.186. Which number comes first?</p>	
12.	<p>Chris hiked 4 miles less than Matt. If Chris hiked 13.04 miles, how far did Matt hike?</p>	
13.	<p>Blake, Andrew, and Kyle were starving after school. They ordered a large pizza to share. If each boy paid \$5.63, how much did the pizza cost?</p> <p>A. \$2.63 C. \$15.89 B. \$16.89 D. \$1.88</p>	
14.	<p>Taylor was in Tom Thumb to pick up a few things. She only had \$20 in her wallet. If she needed bread for \$2.89, milk for \$3.09, lettuce for \$1.29, charcoal for \$6.79, and soap for \$4.79 estimate her total grocery bill.</p> <p>A. \$19.00 C. \$1.90 B. \$29.00 D. \$14.00</p>	
15.	<p>Joey the bunny rabbit was gathering carrots for his family. He started with 8 carrots in his bag. He found 2 groups of 12 carrots in someone's garden, but then lost 4 carrots as he was being chased away for stealing. Then on his way home he had to give away half of the remaining carrots as tax to the rabbit government. This expression represents the number of carrots Joey had when he got home:</p> <p style="text-align: center;">$(8 + 2 \cdot 12 - 4) \div 2$</p> <p>What is the number of carrots he had when he got home?</p>	

16.	You spend \$6.31 for 2 pounds of oranges. Divide to find the cost per pound, rounded to the nearest cent.	
17.	Mr. Underwood wants to use 204 pounds of Aggie Barbeque Sauce. Each container holds 8 pounds of sauce. How many containers will he need to use to reach 204 pounds? A. 25.5 containers B. 196 containers C. 254 containers D. 23 containers	
18.	Savannah earns \$11.50 per hour for helping Ms. Smith in the DIS garden. If she worked 11 hours per week for 2.5 weeks, then how much did she earn total?	
19.	Mrs. Snow bought 5 pencils at \$3.89 each, 6 pens at \$0.95 each, and 11 notebooks at \$5.05 each. Using estimation, about how much will she spend in all? A. \$73.00 B. \$81.00 C. \$88.00 D. \$95.00	

10.	Mrs. Atkins made a drawing of her favorite narwhal. The length of the painting was 8.8 inches and the width of the painting was 2.4 inches less than the length. What was the width of the painting?	
11.	Mr. Wright downloaded some awesome apps to his new Windows phone. The cost of the apps was between \$1.99 and \$3.99 each. If he bought 8 apps, which of the following is the best estimate of the amount he spent on the apps? A. \$10 B. \$24 C. \$48 D. \$50,000	

Write each phrase as an algebraic expression or equation.

12.	three less than two times c		13.	10 divided by a number is 16	
14.	the product of y and 8		15.	twice a number increased by 7 is 55	

16.	Tris spent \$45 on her new Dauntless inform. Tobias spent \$7 more than Tris and Tori spent \$12 less than Tris. What is the total amount spent on these three uniforms? A. \$52 B. \$33 C. \$97 D. \$130	
-----	---	--

1.	There were 32 students playing on the playground at the start of recess. Five minutes later x students had joined the original group. Which expression shows the total number of people on the playground? A. $32+x$ B. $32-x$ C. $32x$ D. $x \div 32$	
2.	Mr. Underwood's kickball team scored 28 total runs in their first four games. If they ended their eight game season with 52 runs, which expression could be used to find how many total runs they scored in their final four games? A. $52+28$ B. $52 \cdot 4 - 28$ C. $52+28 \cdot 8$ D. $52-28$	
3.	Six Flags charges \$80 for a season pass. Your family buys 4 season passes and your family spends \$20 on food each time you visit. If you visit 8 times which equation represents t , the total amount of money spent on admission and food? A. $t = 80 + (8 \cdot 20)$ C. $t = (4 \cdot 80) + (4 \cdot 20)$ B. $t = (4 \cdot 80) + (8 \cdot 20)$ D. $t = 80 + 20$	
4.	You get an allowance of \$15 a week plus \$2 for each chore you perform. If you earned \$37 last week which equation could be used to find n , the number chores you performed? A. $(15+2) \cdot n = 37$ C. $15n+12 = 37$ B. $15-2n = 37$ D. $15+2n = 37$	
5.	There were 20 people playing Survivor. At one point x people had been voted off the island. Which expression shows the number of people left playing the game? A. $20+x$ B. $20-x$ C. $20x$ D. $x \div 20$	
6.	Mrs. Shabanaj joined Amazon Prime for \$79 so that she could get all of her books shipped for free. She bought b books that cost \$12 each. How much money did Mrs. Shabanaj spend in total? A. $79b+12$ B. $79+12b$ C. $79-\frac{b}{12}$ D. $(79+12)b$	
7.	Medieval Times charges \$59 for adult tickets and \$36 for child tickets. A family of 2 adults and 3 children attend the show. Write an equation to find t , the total cost of the family of five to attend. A. $t = 59+36$ C. $t = (59 \times 3) + (36 \times 2)$ B. $t = (59+36) \times 5$ D. $t = (59 \times 2) + (36 \times 3)$	
8.	An electrician charges \$60 for a service call, plus \$75 per hour for labor. If the bill was \$210, which equation could be used to find n , the number of hours worked? A. $210 = 60 + (75 \cdot n)$ C. $210 = (60+75) \cdot n$ B. $210 = (60 \cdot n) + 75$ D. $210 = 60 - (75 \cdot n)$	

For each table below describe the relationship between the input and the output.

9.

Input	Output
2	14
4	28
6	42
8	56
10	70
x	

10.

Input	Output
70	52
60	42
50	32
40	22
30	12
x	

11.

Input	Output
72	24
66	22
60	20
54	18
48	16
x	

12.

Pepperonis, p	60	90	120	150	180
Pizzas, z	2	3	4	5	6

Based on the information in the table, which expression can be used to find z , the number of pizzas containing p pepperonis?

- A. $p + 30$ B. $p - 58$ C. $p \div 30$ D. $30 \cdot p$

13.

Length, l	12	18	24	30	36
Width, w	16	22	28	34	40

Based on the information in the table, which expression can be used to find w , the width of an object with length l ?

- A. $l + 4$ B. $l - 4$ C. $l + 6$ D. $l - 6$

For each table below describe the relationship between the input and the output.

Input	Output
15	35
20	40
25	45
30	50
35	55
x	

Input	Output
50	25
40	20
30	15
20	10
10	5
x	

Input	Output
8	24
10	30
12	36
14	42
16	48
x	

17.

Football games, f	5	10	15	20	25
Touchdowns, t	30	60	90	120	150

Based on the information in the table, which expression can be used to find t , the number of touchdowns that are scored in f games?

- A. $f + 5$ B. $2f$ C. $f + 25$ D. $6f$

18.

Cats, c	22	32	42	52	62
Dogs, d	17	27	37	47	57

Based on the information in the table, which expression can be used to find d , the number of dogs if there are c cats?

- A. $c - 5$ B. $c + 10$ C. $10c$ D. $c - 10$

6.	<p>A lemon meringue pie is divided into 30 pieces. What are all the different numbers of people you could divide it equally among so that there are no pieces left over?</p> <p>A. 1, 2, 15, 30 B. 1, 2, 3, 5, 6, 10, 15, 30 C. 1, 2, 3, 4, 5, 6, 8, 10, 15, 30 D. 2, 3, 10, 15</p>	
7.	<p>Mr. Mangham has 72 football cards. He wants to put them into groups so that each group has the same number of cards. Which of the following does NOT represent the number of cards he could put into each group?</p> <p>A. 6 B. 9 C. 18 D. 32</p>	

8.-9. Find the prime factorization of the following numbers by creating a factor tree. **Write your answer with exponents.**

52
Tree
Answer

108
Tree
Answer

10.-11. Find the Greatest Common Factor (GCF) by creating factor trees and then a Venn diagram.

25, 45	
25	45
Venn	
GCF	

42, 70	
42	70
Venn	
GCF	

1.	Which fraction is not equivalent to $\frac{6}{9}$? A. $\frac{2}{3}$ B. $\frac{12}{18}$ C. $\frac{66}{99}$ D. $\frac{16}{19}$	
----	--	--

2.

Set A $\frac{1}{8}$ $\frac{5}{12}$ $\frac{3}{5}$ $\frac{4}{7}$	Set B $\frac{2}{6}$ $\frac{6}{9}$ $\frac{6}{14}$ $\frac{7}{21}$
---	--

Which statement best describes a common characteristic of Set A but NOT of Set B?

- A. The fractions are all greater than one whole.
- B. The fractions are all less than one whole.
- C. The fractions are all in simplest form.
- D. The fractions are all equivalent.

3.	You are buying donuts for breakfast. You buy 4 blueberry, 12 chocolate, 2 glazed, and 3 sprinkle donuts. Find the fraction of the donuts that are chocolate. Write your answer in simplest form.	
4.	Mrs. Hawley plants a variety of flowers in her flower bed. She plants $\frac{1}{4}$ of the flower bed with lilies, $\frac{7}{16}$ with roses, $\frac{1}{8}$ with pansies, and $\frac{3}{16}$ with daises. Which flower takes up the most room in the flower bed? Which flower takes up the least room in the flower bed?	Most
		Least
5.	You have a twelve pack of Dr. Pepper. You give four cans away to your favorite math teacher and two can away to your favorite LA teacher. What fraction of the cans do you have left? A. $\frac{4}{12}$ B. $\frac{2}{12}$ C. $\frac{1}{2}$ D. $\frac{12}{6}$	

Order the fractions from greatest to least.

6.	$\frac{1}{4}, \frac{2}{10}, \frac{2}{7}$								
7.	$\frac{6}{5}, \frac{6}{7}, \frac{9}{10}$								

8.	The cafeteria serves octopus every 6 days and the cafeteria serves lima beans every 8 days. How many times over a 100 day period will you be able to enjoy octopus with lima beans? A. 2 B. 4 C. 6 D. 8	
9.	Katy Perry got a hit 2 out of 7 times in a baseball game. In the same game Rihanna got a hit in 1 out of 5 at-bats and Selena Gomez got a hit 2 out of 6 at-bats. Who had the best (highest) batting average? A. Katy and Selena tied since they each got 2 hits. B. Selena because $\frac{2}{6}$ is the largest fraction. C. Rihanna since she only had 5 at-bats. D. Katy because $\frac{2}{7}$ has the largest denominator.	
10.	The iTunes Store is celebrating its anniversary by giving away a free app to every 15 th customer. In addition, every 20 th customer will receive a free song. What are the numbers of the first 3 customers to win both a free app and a free song?	

Write each improper fraction as a mixed number in simplest form.

11.	$\frac{9}{5}$		12.	$\frac{22}{8}$	
-----	---------------	--	-----	----------------	--

Write each mixed number as an improper fraction.

13.	$6\frac{2}{3}$		14.	$9\frac{4}{5}$	
-----	----------------	--	-----	----------------	--

Create a factor tree and Venn diagram to solve the following questions.

15.-16.	30, 36	17.-18.	12, 54
GCF of 30 and 36:		GCF of 12 and 54:	
LCM of 30 and 36:		LCM of 12 and 54:	

19.	Which fraction is not equivalent to $\frac{18}{24}$? A. $\frac{3}{4}$ B. $\frac{28}{34}$ C. $\frac{36}{48}$ D. $\frac{180}{240}$	
-----	--	--

20.

Set A

$\frac{5}{8}$	$\frac{7}{12}$	$\frac{2}{3}$	$\frac{11}{20}$
---------------	----------------	---------------	-----------------





Set B

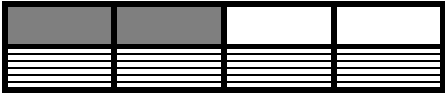
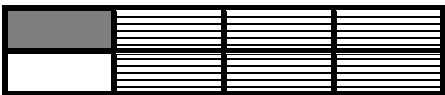
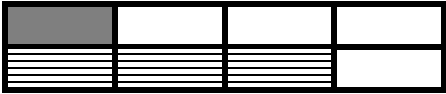
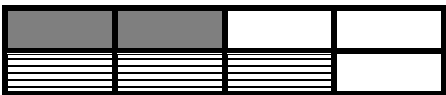
$\frac{1}{6}$	$\frac{5}{9}$	$\frac{6}{14}$	$\frac{7}{21}$
---------------	---------------	----------------	----------------

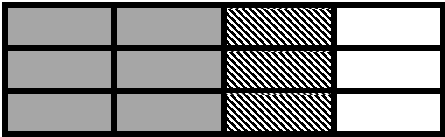
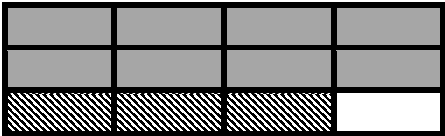

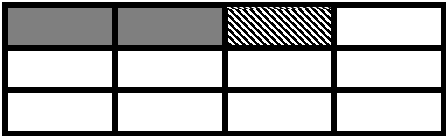
Which statement best describes a common characteristic of Set A or of Set B?

- A. The fractions in Set B are all less than one-half.
- B. The fractions in Set B are all in simplest form.
- C. The fractions in Set A are all greater than one-half.
- D. The fractions in Set A are all improper fractions.

21.	You are buying breakfast bagels. You buy 3 blueberry, 6 plain, 5 cinnamon raisins, and 1 honey grain. Find the fraction of the bagels that are cinnamon raisin. Write your answer in simplest form.		
22.	A farmer plants a variety of crops on his land. The farmer plants $\frac{1}{12}$ of the land with corn, $\frac{1}{4}$ with soybeans, $\frac{3}{8}$ with wheat, and $\frac{3}{16}$ with potatoes. Which crop takes up the most land? Which crop takes up the least land?	Most	
		Least	
23.	You have a package of gum with fifteen pieces. You give three pieces away to your sister and two pieces away to your brother. What fraction of the package do you have left? A. $\frac{2}{3}$ B. $\frac{1}{3}$ C. $\frac{12}{15}$ D. $\frac{1}{5}$		
24.	You and a friend are playing basketball. You only make 3-point baskets, while your friend only makes 2-point baskets. List 4 different scores at which you and your friend could be tied.		
25.	Carol made 8 out of 10 free throws, Sam made 7 out of 8 free throws, and Fred made 6 out of 7 free throws. Who was the most accurate? A. Carol because she shot the most free throws. B. Fred because he only missed one free throw. C. Sam because $\frac{7}{8}$ is greater than $\frac{8}{10}$ and greater than $\frac{6}{7}$. D. Carol because 8 is greater than 7 and greater than 6.		

<p>1.</p>	<p>Each of three students wrote an equation.</p> <ul style="list-style-type: none"> • Zach wrote $3\frac{2}{6} = \frac{10}{3}$ • Kate wrote $4\frac{1}{2} = \frac{9}{2}$ • Brittany wrote $5\frac{1}{4} = \frac{9}{4}$ <p>Which of these students wrote an equation that is true?</p> <p>A. Kate and Brittany C. Zach and Brittany B. Zach and Kate D. Kate only</p>	
<p>2.</p>	<p>Which number is equivalent to $\frac{5}{8}$?</p> <p>A. $\frac{8}{5}$ because flipping the numerator and denominator does not change the number.</p> <p>B. $1\frac{3}{8}$ because $8 \div 5 = 1$ with a remainder of 3.</p> <p>C. $\frac{10}{13}$ because $5 + 5 = 10$ and $8 + 5 = 13$.</p> <p>D. $\frac{15}{24}$ because $5 \times 3 = 15$ and $8 \times 3 = 24$.</p>	
<p>3.</p>	<p>Maddie needs $\frac{1}{4}$ yard of ribbon for one project and $\frac{3}{8}$ yard for another project. Each strip below represents 1 yard of ribbon. Which strip is shaded to show the total amount of ribbon that Maddie needs?</p> <p>A. </p> <p>B. </p> <p>C. </p> <p>D. </p>	

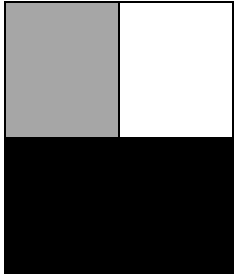
4.	Mark bought $2\frac{1}{3}$ pounds of oranges, $3\frac{1}{4}$ pounds of bananas, and $1\frac{1}{2}$ pounds of apples. How many pounds of fruit did he buy in all?	
5.	Mike is $4\frac{1}{2}$ years older than Phil. Jake is $2\frac{1}{2}$ years younger than Phil. Mike is 11 years old. What is Jake's age?	
6.	Mary had $\frac{7}{8}$ of a yard of material. If she used $\frac{2}{3}$ of a yard for a costume, how much material does she have left?	
7.	<p>Draw a model to represent the following equation. Write your solution to the equation in the answer blank on the right.</p> $n = 1 - \frac{1}{4}$	
8.	<p>Mike painted $\frac{1}{8}$ of the wall and Tyler painted $\frac{3}{4}$ of the same wall. Which model below is best shaded to represent this situation?</p> <p>A. </p> <p>B. </p> <p>C. </p> <p>D. </p>	
9.	Brandon ate $\frac{1}{6}$ of the pizza and Ryan ate $\frac{2}{3}$ of the pizza. What is the difference in the amount they ate?	
10.	A restaurant's salad bar used $25\frac{2}{3}$ pounds of lettuce on Saturday and $27\frac{1}{4}$ pounds on Sunday. How many pounds of lettuce did the restaurant use all weekend?	

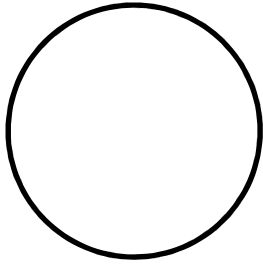
11.	<p>Each of three students wrote an equation.</p> <ul style="list-style-type: none"> Emily wrote $\frac{11}{2} = 5\frac{1}{2}$ Brandon wrote $\frac{7}{3} = 3\frac{1}{3}$ Ricky wrote $\frac{8}{5} = 5\frac{3}{5}$ <p>Which of these students wrote an equation that is NOT true?</p> <p>A. Emily and Ricky C. Brandon and Ricky B. Emily and Brandon D. All equations are true</p>	
12.	<p>Which statement is true about the fraction $\frac{9}{16}$?</p> <p>A. The fraction is less than $\frac{1}{2}$ because $16 - 9 = 7$ and 7 is less than half of 16.</p> <p>B. The fraction is improper because 9 is less than 16.</p> <p>C. The fraction can be simplified to $\frac{3}{4}$ because $9 \div 3 = 3$ and $16 \div 4 = 4$.</p> <p>D. The fraction is equivalent to $\frac{27}{48}$ because $9 \times 3 = 27$ and $16 \times 3 = 48$.</p>	
13.	<p>Mike painted $\frac{2}{3}$ of his face red and he painted $\frac{1}{4}$ of his face blue. Which model below is best shaded to represent this situation?</p> <p>A. </p> <p>B. </p> <p>C. </p> <p>D. </p>	

Barbequed Lima Beans [makes 10 servings]			
Lima Beans	$1\frac{1}{2}$ pounds	Ketchup	$1\frac{1}{2}$ cups
Water	$\frac{47}{8}$ cups	Tabasco Sauce	13 drops
Chopped Onions	$2\frac{1}{4}$ cups	Dark corn syrup	$\frac{5}{6}$ of a cup
Brown Sugar	$1\frac{3}{8}$ cups	Bacon	$\frac{20}{32}$ of a pound

1.	If Mrs. Fauatea mixes the chopped onions, brown sugar, and ketchup together, how many total cups of ingredients does she have?	
2.	Which of the following is equivalent to the amount of chopped onions in the recipe? A. $\frac{6}{4}$ because $1 \times 2 + 4 = 6$. C. $\frac{9}{4}$ because $4 \times 2 + 1 = 9$. B. $\frac{7}{4}$ because $4 + 2 + 1 = 7$. D. $\frac{17}{4}$ because $4^2 + 1 = 17$.	
3.	Convert the cups of water to a mixed number.	
4.	Mr. Underwood accidentally pours $5\frac{1}{8}$ cups of ketchup into the recipe. How much extra ketchup did Mr. Underwood add?	
5.	Convert the pounds of bacon into a simplified fraction.	
6.	Which of the following is an NOT an equivalent fraction to the amount of dark corn syrup listed above? A. $\frac{10}{12}$ B. $\frac{25}{36}$ C. $\frac{50}{60}$ D. $\frac{35}{42}$	
7.	Mrs. Atkins loves lima beans so she adds $\frac{5}{8}$ of a pound of extra lima beans to the recipe. Draw a picture below to represent $x = 1\frac{1}{2} + \frac{5}{8}$, the amount of lima beans in her recipe. <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> <div style="border: 2px solid black; width: 150px; height: 80px; margin: 5px;"></div> <div style="border: 2px solid black; width: 150px; height: 80px; margin: 5px;"></div> <div style="border: 2px solid black; width: 150px; height: 80px; margin: 5px;"></div> </div> Each rectangle = 1 pound	

12.	<p>Mrs. Buckmaster has a huge pot which holds 8 gallons. She pours in $2\frac{4}{5}$ gallons of water and $3\frac{1}{2}$ gallons of chicken broth. Does she have enough room to add the one gallon of beef broth she wants to add?</p> <p>A. Yes, because $8 - \left(2\frac{4}{5} + 3\frac{1}{2}\right) = 1\frac{7}{10}$ and $1\frac{7}{10} > 1$.</p> <p>B. No, because $\left(3\frac{1}{2} - 2\frac{4}{5}\right) = \frac{7}{10}$ and $\frac{7}{10} < 1$.</p> <p>C. Yes, because $2\frac{4}{5} + 3\frac{1}{2} = 6\frac{3}{10}$ and $6\frac{3}{10} > 1$.</p> <p>D. No, because $2\frac{4}{5} + 3\frac{1}{2} = 6\frac{3}{10}$ and $6\frac{3}{10} < 8$.</p>	
13.	<p>If Mr. Mangham goes running 18 days during the month of April (30 days), what fraction of the days in the month did he run? First, write this fraction in simplest form. Second, complete the diagram to model your answer.</p> <div style="text-align: center; border: 1px solid black; width: 300px; height: 60px; margin: 10px auto;"></div>	
14.	<p>What is a common characteristic of the fractions in either Set A or Set B?</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Set A</p> <div style="border: 1px solid black; padding: 5px; display: inline-block;"> $\frac{2}{7}$ $\frac{3}{8}$ $\frac{1}{4}$ $\frac{2}{5}$ </div> </div> <div style="text-align: center;"> <p>Set B</p> <div style="border: 1px solid black; padding: 5px; display: inline-block;"> $\frac{4}{5}$ $\frac{7}{10}$ $\frac{2}{9}$ $\frac{6}{11}$ </div> </div> </div> <p>A. All fractions in Set B are greater than one-half. B. All fractions in Set B are less than three-fourths. C. All fractions in Set A are improper. D. All fractions in Set A are less than one-half.</p>	
15.	<p>Jonah measured the length of his thumb in centimeters. The length was between 4.5 and 4.6 centimeters. Which of the following could have been the length of his thumb?</p> <p>A. 4.06 cm C. 4.51 cm B. 4.48 cm D. 4.61 cm</p>	

16.	<p>Mrs. Fauatea bought muffins and drinks for a breakfast meeting. The muffins were sold in packages of 12, and the drinks were sold in packages of 18. What is the smallest number of packages of each item that Mrs. Fauatea could have bought and still have the same number of muffins and drinks?</p> <p>A. 2 packages of muffins and 3 packages of drinks B. 18 packages of muffins and 12 packages of drinks C. 3 packages of muffins and 2 packages of drinks D. 6 packages of muffins and 5 packages of drinks</p>	
17.	<p>Newspaper advertisements can be $\frac{1}{4}$ of a page, $\frac{1}{2}$ of a page, or a full page. The shaded parts of the model below show the fractions of a page used for two advertisements.</p>  <p>Which of the following equations represents the total fraction of the page used for these two advertisements?</p> <p>A. $\frac{1}{3} + \frac{1}{3} = \frac{2}{3}$ B. $\frac{1}{4} + \frac{1}{2} = \frac{3}{4}$ C. $\frac{1}{2} + \frac{1}{2} = \frac{2}{4}$ D. $\frac{2}{3} + \frac{1}{2} = \frac{3}{5}$</p>	
18.	<p>Three pigs entered a race around a track. Piggly takes 6 minutes to run one lap. Piglet takes 3 minutes to run one lap and it takes Wiggly 5 minutes to run one lap. If all three pigs begin the race at the same time, how many minutes will it take for all three pigs to be at the starting point again?</p>	

19.	<p>A hockey player practices $2\frac{2}{3}$ hours total on Monday and Tuesday and $2\frac{1}{2}$ hours total on Wednesday and Thursday. If hockey players are only allowed to practice 7 hours Monday-Friday, can the hockey player practice for 2 hours on Friday?</p> <p>A. Yes, because $7 - 2\frac{2}{3} = 4\frac{1}{3}$ and $4\frac{1}{3} > 2$.</p> <p>B. No, because $\left(7 - 2\frac{2}{3}\right) - 2\frac{1}{2} = 1\frac{5}{6}$ and $1\frac{5}{6} < 2$.</p> <p>C. Yes, because $2\frac{2}{3} + 2\frac{1}{2} = 5\frac{1}{6}$ and $5\frac{1}{6} > 2$.</p> <p>D. No, because $2\frac{2}{3} - 2\frac{1}{2} = \frac{1}{6}$ and $\frac{1}{6} < 2$.</p>	
20.	<p>If Mrs. Magee cooks her ham for 20 minutes, what fraction of an hour does she cook her ham? First, write this fraction in simplest form. Second, complete the diagram to model your answer.</p> <div style="text-align: center;">  </div>	
21.	<p>Julie read $\frac{1}{4}$ of a book on the first day, $\frac{1}{2}$ the second day, and $\frac{1}{8}$ the third day. She finished the book on the fourth day. What part of the book did Julie read on the fourth day?</p>	
22.	<p>Mr. Underwood's puppy weighs $7\frac{5}{8}$ pounds and Mrs. Landry's dog weighs $22\frac{3}{16}$ pounds. What is the difference in their weights?</p>	

Determine the better buy by finding the unit rate for each item.

1.	<p>Broccoli: 4 lbs for \$6.60 or 6 lbs for \$9.60?</p> <p>A. 4 lbs because the unit rate is \$26.40 per pound. B. 4 lbs because the unit rate is \$1.65 per pound. C. 6 lbs because the unit rate is \$57.60 per pound. D. 6 lbs because the unit rate is \$1.60 per pound.</p>	
2.	<p>Dr. Pepper: 20 oz for \$1.50 or 32 oz for \$1.92?</p> <p>A. 20 oz because the unit rate is \$0.075 per ounce. B. 32 oz because the unit rate is \$0.60 per ounce. C. 20 oz because the unit rate is \$0.75 per ounce. D. 32 oz because the unit rate is \$0.06 per ounce.</p>	
3.	<p>In a first-aid kit the ratio of large bandages to small bandages is 3 to 2. Based on this ratio, how many large bandages are in the kit if there are a total of 80 bandages?</p> <p>A. 32 B. 48 C. 16 D. 40</p>	
4.	<p>A train travels at 850 miles in five hours. What is the average speed in one hour?</p>	
5.	<p>Luke Skywalker has 6 fabulous friends, 14 evil enemies, and 12 awesome animals. Write the ratio of animals to enemies in simplest form.</p>	
6.	<p>In band class Mr. Oglesby is able to play 480 notes in 3 minutes. What is the ratio of notes to minutes in simplest form?</p> <p>A. 16 to 1 B. 3 to 480 C. 3 to 16 D. 160 to 1</p>	
7.	<p>Mrs. Fauatea went to the arcade to play Pokémon. She paid \$2 for every 11 token she bought. She spent a total of \$16 on tokens. Which equation can be used to determine t, the number of token Mrs. Fauatea bought?</p> <p>A. $\frac{2}{16} = \frac{t}{11}$ B. $\frac{2}{11} = \frac{t}{16}$ C. $\frac{18}{t} = \frac{11}{2}$ D. $\frac{11}{2} = \frac{t}{16}$</p>	

13.	To make lemonade, you mix 2 cups of lemon juice to 7 cups of water. How many cups of lemon juice do you need for 28 cups of water?	
14.	A plane travels at 2,220 miles in four hours. What is the average speed in one hour?	
15.	Trent has four pennies, six nickels, and eight dimes. Write the ratio of nickels to dimes in simplest form .	
16.	Ms. Landry decides to give her class candy....AGAIN. She has 25 students and 125 Hershey Kisses. What is the ratio of Hershey Kisses to students? A. 25 to 1 B. 1 to 5 C. 5 to 1 D. 1 to 25	
17.	Four out of every nine band students will practice over the summer. If there are 81 band students at school, which proportion can be used to find s, the number of students who will practice over the summer? A. $\frac{(9-4)}{9} = \frac{s}{81}$ B. $\frac{4}{s} = \frac{81}{9}$ C. $\frac{9}{81} = \frac{s}{4}$ D. $\frac{4}{9} = \frac{s}{81}$	
18.	In math class on Friday there were 56 questions asked by a total of 8 students. What is the ratio of math questions to students? A. 8 to 1 B. 1 to 8 C. 7 to 1 D. 8 to 56	
19.	At Albertson's, apples are 5 for \$0.70. At Tom Thumb, apples are 2 for \$0.26. At Kroger, apples are 4 for \$0.60. Which store offers a better unit rate for apples?	
20.	The ratio of Duke fans to Texas A&M fans is about 7 to 3. If there were 15 Texas A&M fans, how many Duke fans would there be?	
21.	A worker at Domino's pizza uses 20 tomatoes to make 4 pizzas. At this rate, how many tomatoes will the worker use to make 350 pizzas?	
22.	Every day a zoo keeper feeds the 4 gorillas a total of 240 lb of food. At this rate how many pounds of food would the keeper feed 6 gorillas? A. 60 lb B. 1440 lb C. 360 lb D. 40 lb	

1. Mr. Sargent has 5 music classes with 32 students in each class. Today, 4 students were absent from his class and all his other classes were full. Which expression could be used to find the total number of students in Mr. Sargent's classes today?

A. $(32 \times 5) - 4$

C. $(32 - 4) \times 5$

B. $(32 \times 4) - 5$

D. $32 \div (5 - 4)$

2. What is the value of this expression?

$$3 + 5 \times (8 - 3)$$

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

3. Angie has a bag that contained 14 oranges. She put 3 of the oranges in her brother's lunch box. She put 2 times as many oranges in the refrigerator as she put in her brother's lunch box. She used the rest of the oranges to make orange juice. Based on the expression below, how many oranges did Angie use to make orange juice?

$$14 - (3 + 2 \times 3)$$

A. 8

C. 1

B. 5

D. 9

4. Ryan is in charge of ordering pizza for 112 campers. Each camper will get 2 slices. One pizza contains 8 slices. How many pizzas does Ryan need to order?

A. 7 pizzas

C. 16 pizzas

B. 14 pizzas

D. 28 pizzas

5. Anil has 18 dollars and wants to buy some desserts from the bakery. Jelly doughnuts cost \$2 each, éclairs cost \$3 each, milkshakes cost \$4 each, and chocolate cakes cost \$6 each. Anil wants to spend all his money on one kind of dessert. Which kind of dessert should Anil NOT buy?

- A. Éclairs
- B. Milkshakes
- C. Jelly doughnuts
- D. Chocolate cakes

6. What is the prime factorization of 288?

- A. $2^4 \times 3^2$
- B. $2^5 \times 3^2$
- C. $2^6 \times 3^2$
- D. $2^4 \times 3^3$

7. At a swimming pool, Hector swam between 9 and 21 laps each day. Each lap is 26.8 m long. Hector swam at this pool 10 days. Which of the following is a reasonable estimate of the total number of meters Hector swam?

- A. 1,000 m
- B. 9,000 m
- C. 4,500 m
- D. 1,800 m

8. Andrew has \$5 less than 3 times as much money as Bianca. He has \$74. If d represents Bianca's money, which equation can be used to find the amount of money she has?

- A. $3d + 5 = 74$
- B. $3d - 5 = 74$
- C. $5d \times 3 = 74$
- D. $5d - 3 = 74$

12. Debra got 5 out of 6 questions correct on her quiz. Which number is NOT equivalent to $\frac{5}{6}$?

A. $\frac{10}{12}$

C. $\frac{50}{60}$

B. $\frac{15}{24}$

D. $\frac{30}{36}$

13. Oscar had \$135.65 saved in his piggy bank. Last week he earned another \$62.43. He then went to the movies and spent \$18.74. How much money did Oscar have after the movies?

A. \$198.08

C. \$73.22

B. \$179.34

D. \$116.91

14. Mr. Smith mailed 3 packages. The greatest amount he paid to mail one of these packages was \$3.60. The least amount he paid to mail one of these packages was \$1.70. What could be the total amount Mr. Smith paid to mail the 3 packages?

A. \$8.30

C. \$5.10

B. \$11.50

D. \$10.80

15. Cyrus worked after school for six months to earn money for his summer trip. He saved a total of \$1,500. His round-trip airfare on the trip was \$240. On his trip he spent \$36 per day. On what day of his trip did he use the last of his summer savings?

5. Laura is listing her age and her mom's age over the past four years. The table below shows l , Laura's age and m , her mom's age.

Laura's age, l	Her mom's age, m
7	35
8	36
9	37
10	38

If Laura continues the pattern, which of the following expressions can she use to find m , her mom's age when Laura is l years old?

- A. $\frac{l}{5}$ C. $5 \cdot l$
B. $l+7$ D. $l+28$

6. Fifty sixth graders decided to raise money to help local charities. Each student brought in \$5. The group then gave \$35 to one charity and \$45 to another charity. The expression below represents the amount of money the sixth graders had remaining.

$$50 \times 5 - (35 + 45)$$

How many money did the students have remaining?

- A. \$260 C. \$180
B. \$215 D. \$170
7. A local water tank holds 50,000 gallons of water. If the tank starts out completely full and the local community uses 250 gallons of water each minute, which equation below can be used to find w , the amount of water remaining after m minutes?

- A. $w = 250m + 50,000$ C. $w = 50,000 - 250m$
B. $w = 250m - 50,000$ D. $w = 50,000 + 250m$

8. The table below shows how far a car that is going 30 miles per hour would travel in a given number of minutes.

Minutes, m	Distance, d (miles)
90	45
60	30
30	15
20	10

Which expression best represents the distance d the car would travel in m minutes?

- A. $\frac{m}{2}$ C. $2m$
- B. $30m$ D. $\frac{m}{30}$

9. You and your best friend got out to eat. You buy 2 hamburgers at \$3.95 each, 2 french fries at \$1.65 each and a large chocolate milkshake to share for \$2.60. If you hand the server a \$20 bill, how much change will you receive?

- A. \$6.20 C. \$8.80
- B. \$7.90 D. \$13.80

10. Which expression is the prime factorization of 216?

- A. $2^2 \times 3^4$ C. $2^3 \times 3^3$
- B. $2^2 \times 3^2$ D. $2^4 \times 3^2$

11. Which expression shows the prime factorization of 320?

- A. 32×10 C. $2^6 \times 3$
- B. $2^5 \times 5$ D. $2^6 \times 5$

12. Ten out of twenty-five students say their math teacher does not give enough homework. The fraction of students saying their language arts teacher does not give enough homework is greater than math. Which fraction below could represent the fraction of students saying their language arts teacher does not give enough homework?

A. $\frac{1}{3}$

C. $\frac{3}{8}$

B. $\frac{4}{7}$

D. $\frac{4}{18}$

13. The numbers in each set shown below have a common characteristic.

Set A

18	24
60	84

Set B

12	28
32	46

Which statement best describes a common characteristic of Set A or Set B?

- A. Each number in Set B is a multiple of 4.
- B. Each number in Set A is a multiple of 9.
- C. Each number in Set A is a multiple of 6.
- D. Each number in Set B is a multiple of 320.

14. Which of the following is not a common factor of 36 and 48?

A. 9

C. 6

B. 12

D. 4

15. Sarah eats squash every 4 days and she eats lima beans every 10 days. If she just ate squash and lima beans yesterday, how many times will she eat them together over the next 50 days?

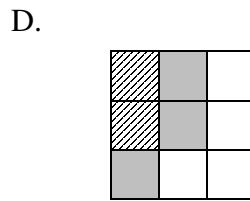
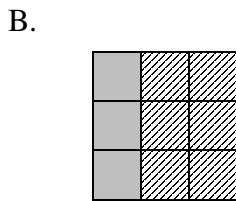
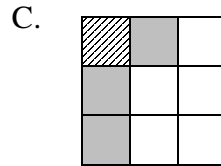
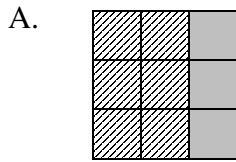
A. 12

C. 2

B. 5

D. 1

16. Katniss ate $\frac{2}{9}$ of an apple and Tris ate $\frac{1}{3}$ of an apple. Which model below best represents the expression $\frac{2}{9} + \frac{1}{3}$?



17. The price of napkins and the number of napkins is listed in the table below.

Number of Napkins (n)	Price of Napkins (p), in cents
200	140
300	210
400	280
500	350
600	420

Let p represent the price of the napkins and n the number of napkins. Which equation shows the relationship between the price of napkins and number of napkins?

A. $p = 7 \cdot n$

C. $p = 0.7 \cdot n$

B. $n = p + 70$

D. $p = n + 100$

18. Cookie Monster had \$25 to buy cookies. He spent \$5.75 on chocolate chip cookies and \$6.30 on peanut butter cookies. If Elmo steals \$5.15 from Cookie Monster how much money does Cookie Monster have left?

- A. \$12.05
- B. \$17.20
- C. \$12.95
- D. \$7.80

19. Hermione is measuring the lengths of a variety of wizard wands. Which listing below shows wands that are less than 8.4 inches listed in order from greatest to least?

- A. 8.62, 8.48, 8.26, 8.15
- B. 8.38, 8.12, 7.99, 7.65
- C. 7.13, 7.46, 7.78, 8.13
- D. 8.17, 8.09, 8.9, 7.82

20. Carlee bought 2 books each month for one entire year. The least expensive was \$9.75 and the most expensive was \$11.25. Based on this information, which of the following is true?

- A. Carlee spent more than \$25 every month during the year on books.
- B. Carlee spent less than \$200 to buy all her books during the year.
- C. Carlee paid less than \$12.00 every month during the year on books.
- D. Carlee spent more than \$230 to buy all her books during the year.

21. Evaluate $80 - (12 + 12) + 15 \cdot 2$.

- A. 26
- B. 86
- C. 142
- D. 110

25. Rachel has 20 gallons of water to use over 3 days on Survivor Island. She uses $4\frac{1}{3}$ gallons on Day 1 and $8\frac{5}{6}$ gallons on Day 2. If she needs to use 7 gallons on Day 3, does she have enough left?

A. No, because $8\frac{5}{6} + 4\frac{1}{3} > 7$.

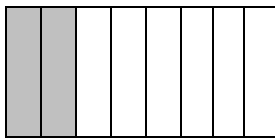
B. No, because $20 - \left(4\frac{1}{3} + 8\frac{5}{6}\right) < 7$

C. Yes, because $20 - 8\frac{5}{6} > 7 - 4\frac{1}{3}$

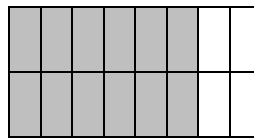
D. Yes, because $20 - 4\frac{1}{3} > 7$

26. Donkey was making waffles for breakfast. He gave Shrek $\frac{7}{8}$ of a waffle. Shrek ate $\frac{5}{16}$ of a waffle before Puss in Boots stole the rest. Which model can be used to represent the fraction of a waffle Puss in Boots stole?

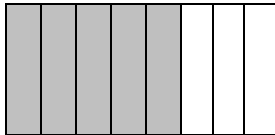
A.



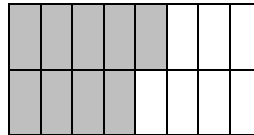
C.



B.



D.



27. Woody was counting the number of items in the bedroom. He counted 12 dolls and 18 games. The next day 8 more dolls arrived. What is the new ratio of dolls to games?

A. 12:18

C. 18:20

B. 10:9

D. 6:13

28. On a recent trip to Australia there were 2 leaders for every 24 students. There were 5 leaders on the trip. Which proportion can be used to find the number of students on the trip?

A. $\frac{2}{24} = \frac{5}{x}$

C. $\frac{2}{5} = \frac{x}{24}$

B. $\frac{2}{24} = \frac{x}{5}$

D. $\frac{2}{x} = \frac{5}{24}$

29. Sally had $5\frac{1}{3}$ pounds of candy. Suzie had $2\frac{1}{6}$ pounds less than Sally. Sarah had $3\frac{1}{2}$ pounds more than Suzie. How many pounds of candy did Sarah have?

A. $3\frac{1}{6}$ pounds

C. $7\frac{1}{2}$ pounds

B. $5\frac{2}{3}$ pounds

D. $6\frac{2}{3}$ pounds

30. The following table shows how much homework a student has in sixth grade.

Homework for a Sixth Grader	
Language Arts	18 minutes per night
Math	120 minutes per five nights
Science	24 minutes per two nights

Which of the following rates is equivalent to the information provided in the table?

A. 100 minutes of language arts homework per five nights.

B. 20 minutes of math homework per night.

C. 36 minutes of science homework per three nights.

D. A total of 42 minutes of homework per night.

31. Movie theater companies estimate that for every 8 people in attendance they will sell a total of 96 ounces of soda. If the theater sold 156 ounces of soda to one group of teenagers, how many teenagers were in the group?

- A. 5 teenagers
- B. 12 teenagers
- C. 13 teenagers
- D. 20 teenagers

32. Scooby is practicing his multiplication facts. Before eating a Scooby Snack he answers 256 math problems. If Scooby can solve 30 math problems per minute, which of the following statements is a reasonable conclusion?

- A. He will have solved more than half of the problems after 4 minutes.
- B. He will have solved more than 70 problems after 2 minutes.
- C. He will have solved all the problems in less than 9 minutes.
- D. He will have solved less than 200 problems after 7 minutes.

33. In a recent survey, 7 out of 12 students say that their current math teacher is their favorite teacher of all-time. Based on this information, if 480 students are surveyed how many would choose their current math teacher as their all-time favorite teacher?

- A. 280 students
- B. 40 students
- C. 396 students
- D. 200 students

34. At lunch last Thursday 3 out of every 8 students chose a grilled cheese sandwich. There were 600 students at school on Thursday. How many of the students did not choose a grilled cheese sandwich?

- A. 225 because $\frac{3}{8} = \frac{225}{600}$
- B. 1600 because $\frac{8}{3} = \frac{1600}{600}$
- C. 525 because $600 - (600 \div 8) = 525$
- D. 375 because $\frac{3}{8} = \frac{225}{600}$ and $600 - 225 = 375$

35. A recipe to make 8 servings of cake calls for many ingredients, including:
- 4 cups flour
 - 2 teaspoons vanilla
 - 1 cup water

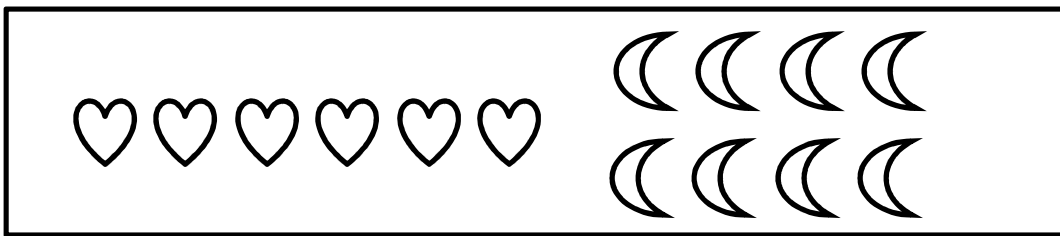
Based on this information, which statement is true?

- A. For 4 servings you would need 8 cups of flour
- B. For 32 servings you would need 8 teaspoons of vanilla
- C. For 40 servings you would need 8 cups of water
- D. For 16 servings you would need a total of 9 cups of flour and water

36. At a recent Black Friday sale video games were on sale at 5 for \$70. In one hour the store sold 130 video games. Which equation can be used to determine x , the dollar amount of video games sold in the hour?

- A. $x = 130 - (70 + 5)$
- B. $\frac{5}{70} = \frac{x}{130}$
- C. $\frac{5}{70} = \frac{130}{x}$
- D. $x = (130 \cdot 5) - 70$

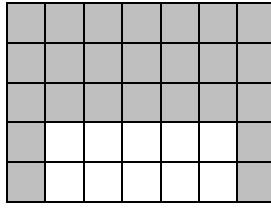
37.



In the picture above, what is the ratio of moons to hearts?

- A. 6:8
- B. 8:14
- C. 4:3
- D. 3:7

38. What is the ratio of shaded small squares to the total small squares?



A. 5:2

C. 2:7

B. 5:7

D. 2:5

39. A basketball team made 35 free throws in 10 games. At this rate, how many games would it take them to make 49 free throws?

40. Phil planted a money tree in his backyard. Originally the tree was 10.7 feet tall. It grew 1.2 feet each year for the first four years. How tall was the money tree at the end of the fourth year?

Show all work on a separate sheet of paper.

In the box below draw a picture or list the rules to help you with converting
Fractions-Decimals-Percents

--

1.	DIS math students were checking their work carefully on each math problem they completed. Each student completed 18 problems in 30 minutes. If each student continues at this rate, how many problems could a student complete in 4 hours?	
2.	In a recent survey 78% of football fans votes Alabama as the best NCAA football team of the last 10 years. Convert 78% to a fraction in simplest form.	
3.	In another survey $\frac{2}{5}$ of students voted soccer as their favorite sport and 0.15 of students voted baseball/softball as their favorite sport. What percentage of students voted for some other sport?	
4.	<p>Mr. Mangham finally learned how to read. His first book is 56 pages long and right now he can read at a rate of 6 pages per day. Based on this information, which of the following statements is a reasonable conclusion?</p> <p>A. He will have read more than 50% of the book after 4 days.</p> <p>B. He will have read less than $\frac{1}{4}$ of the book after 3 days.</p> <p>C. He will have 14 pages left to read after day 7.</p> <p>D. He will have read exactly 36 pages in the first 8 days.</p>	

5.	It was third period in the secret teacher room at DIS. There were 12 teachers sleeping on the sofas and 48 teachers watching Dora the Explorer on television. Write a simplified ratio that compares the sleeping teachers to the TV watching teachers. What percent of the teachers are watching TV?	Ratio
		Percent watching TV
6.	<p>Which pair of numbers is not equivalent?</p> <p>A. 75% and $\frac{3}{4}$ C. 0.9 and $\frac{9}{100}$</p> <p>B. $\frac{6}{200}$ and 3% D. 0.6 and 60%</p>	
7.	<p>The numbers in each set shown below have a common characteristic.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>Set S</p> <p>0.62 $\frac{55}{100}$ $\frac{4}{11}$ 67%</p> </div> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>Set T</p> <p>0.18 $\frac{1}{10}$ $\frac{5}{100}$ 15%</p> </div> </div> <p>Which statement best describes a common characteristic of the numbers in Set S or Set T?</p> <p>A. Each number in Set T is less than 20%.</p> <p>B. Each number in Set S is less than 0.65.</p> <p>C. Each number in Set T is greater than 0.1.</p> <p>D. Each number in Set S is greater than $\frac{13}{20}$.</p>	
8.	<p>A black garden ant is $\frac{17}{25}$ cm long. What is an equivalent length of this black garden ant in centimeters?</p> <p>A. 0.64 cm B. $1\frac{8}{25}$ cm C. $\frac{5}{8}$ cm D. Not here</p>	
9.	70.8% of the Earth's surface is covered in water. What decimal is equivalent to 70.8%?	

In a survey of 1000 people in 2012 they were asked to name their favorite season. The results are listed in the table below.

Favorite Season			
Winter	Spring	Summer	Fall
6%	35%	31%	28%

What fraction of people did not choose winter?

- 10.
- A. $\frac{3}{50}$, because $\frac{3}{50} = \frac{6}{100}$
 - B. $\frac{7}{25}$, because $\frac{7}{25} = \frac{28}{100}$
 - C. $\frac{47}{50}$, because $100 - 6 = 94$ and $\frac{94}{100} = \frac{47}{50}$
 - D. $\frac{2}{5}$, because $10 - 6 = 4$ and $\frac{4}{10} = \frac{2}{5}$

11. Davis' group was responsible for painting windows on the set of the school play. The group painted 24 windows in 90 minutes. If they continue painting at the rate, how many windows would they paint in 6 hours?

12. Mr. Mangham conducted a survey of 400 students asking if they liked the color blue or orange more. 72% liked the color blue more. What percentage liked the color orange more?

13. Since 18 out of every 25 students liked blue more, how many total students chose the color blue in the question above?

14. Jessica is going to read a 219-page book. She reads at a rate of 20 pages per day. Based on this information, which of the following statements is a reasonable conclusion?

- A. She will have read less than $\frac{1}{2}$ of the book after 5 days.
- B. She will have read more than $\frac{1}{3}$ of the book after 3 days.
- C. She will have read more than 138 pages after 4 days.
- D. She will have read fewer than 110 pages after 6 days.

15.	Mrs. Atkins loves to collect Beanie Babies. She has collected 40 Beanie Babies in 6 years. How many years will it take her to collect 100 Beanie Babies? Write a proportion and then solve the problem. Label.	Proportion
		Answer
16.	There were 15 fish alive on the beach and 45 dead fish on the beach in Nicaragua. Write a simplified ratio that compares the alive fish to the dead fish. What percent of the fish are alive out of the total number of fish on the beach?	Ratio
		Percent alive
17.	<p>Which pair of numbers is equivalent?</p> <p>A. 0.5 and $\frac{1}{5}$ C. 0.06 and $\frac{6}{10}$</p> <p>B. $\frac{7}{10}$ and 0.07 D. 0.08 and $\frac{8}{100}$</p>	
18.	<p>The numbers in each set shown below have a common characteristic.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Set S</p> <div style="border: 1px solid black; padding: 5px; display: inline-block;"> 0.8 $\frac{60}{100}$ $\frac{5}{9}$ 0.57 </div> </div> <div style="text-align: center;"> <p>Set T</p> <div style="border: 1px solid black; padding: 5px; display: inline-block;"> 0.4 $\frac{20}{100}$ $\frac{4}{9}$ 0.04 </div> </div> </div> <p>Which statement best describes a common characteristic of the numbers in Set S or Set T?</p> <p>A. Each number in Set T is less than $\frac{1}{4}$.</p> <p>B. Each number in Set S is less than 0.65.</p> <p>C. Each number in Set T is greater than $\frac{1}{2}$.</p> <p>D. Each number in Set S is greater than 0.5.</p>	

19. A king snake is $\frac{31}{50}$ m long. What is an equivalent length of this king snake in meters?

A. 0.31 m B. $3\frac{1}{50}$ m C. 0.062 m D. Not here

20. The table below shows the number of teeth of each type in Nate's mouth.

Nate's Teeth			
Incisor	Canine	Premolar	Molar
8	4	8	12

What percentage of teeth in Nate's mouth are incisors?

A. 25%, because $\frac{8}{32} = \frac{1}{4}$ and $\frac{1}{4} = \frac{25}{100}$

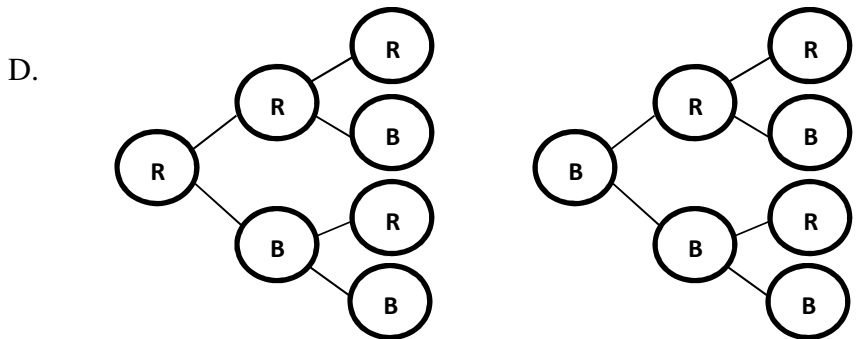
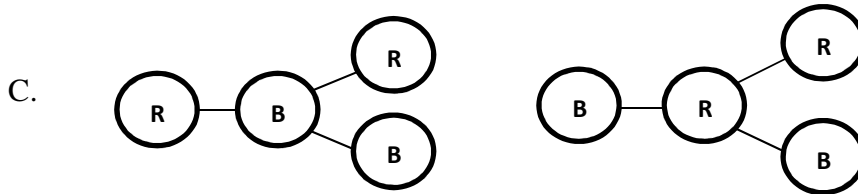
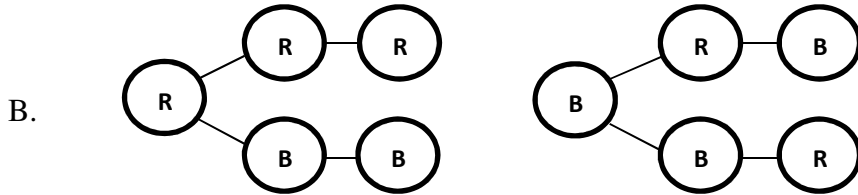
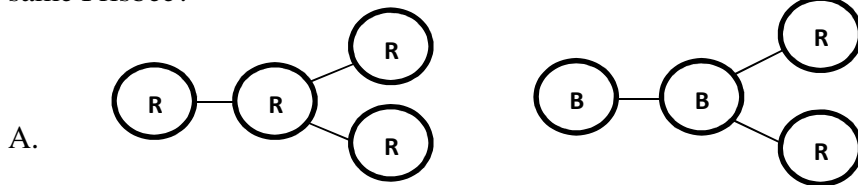
B. 8%, because $\frac{8}{100} = 8\%$

C. 24%, because $32 - 8 = 24$


D. 76%, because $\frac{12+8+4}{100} = \frac{24}{100}$ and $\frac{100}{100} - \frac{24}{100} = \frac{76}{100}$

Show all work on a separate sheet of paper.

Elise had a Frisbee that was red on one side and blue on the other. She tossed the Frisbee 3 times. Which diagram shows all the possible results she could get in 3 tosses of the same Frisbee?



1.

2.	<p>There are 24 students in Nick’s math class. 12 of the students have brown hair, 4 have red hair, 5 have blonde hair, and 3 have black hair. If Mr. Underwood randomly selects 1 student to answer a question, what is the probability that this student will have black hair?</p> <p>A. $\frac{1}{2}$ B. $\frac{1}{6}$ C. $\frac{1}{8}$ D. $\frac{1}{24}$</p>															
3.	<p>How many different ways can these 4 objects be arranged in a row if the triangle must be used first?</p> 															
4.	<p>Tim plays basketball for the Dragons. In the past 12 games, Tim has scored 24 or more points 4 times. If this trend continues, what is the probability that Tim will score 24 or more points in tonight’s game?</p> <p>A. $\frac{1}{24}$ B. $\frac{1}{12}$ C. $\frac{1}{8}$ D. $\frac{1}{3}$</p>															
5.	<p>The table below shows the ice cream preferences of 40 people.</p> <table border="1" data-bbox="380 1071 930 1373"> <thead> <tr> <th colspan="2" style="text-align: center;">Favorite Ice Cream</th> </tr> <tr> <th style="text-align: center;">Color</th> <th style="text-align: center;">Number of Students</th> </tr> </thead> <tbody> <tr> <td>Cookie and Cream</td> <td style="text-align: center;">12</td> </tr> <tr> <td>Chocolate Chip</td> <td style="text-align: center;">6</td> </tr> <tr> <td>Vanilla</td> <td style="text-align: center;">9</td> </tr> <tr> <td>Strawberry</td> <td style="text-align: center;">8</td> </tr> <tr> <td>Butter Pecan</td> <td style="text-align: center;">5</td> </tr> </tbody> </table> <p>What is the probability that one student selected at random prefers chocolate chip ice cream?</p>	Favorite Ice Cream		Color	Number of Students	Cookie and Cream	12	Chocolate Chip	6	Vanilla	9	Strawberry	8	Butter Pecan	5	
Favorite Ice Cream																
Color	Number of Students															
Cookie and Cream	12															
Chocolate Chip	6															
Vanilla	9															
Strawberry	8															
Butter Pecan	5															
6.	<p>In the problem above, how many students would you expect to choose strawberry if you asked 100 students?</p>															

Max has eight different colors of socks he can wear: white, black, gray, purple, brown, yellow, green, and blue. Use this information for the questions below. (Write answers in simplest form.)

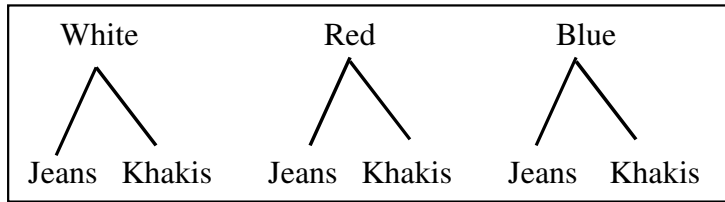
7.	If he selects a color of sock at random, what is the probability it will be black or gray?						
8.	If he selects a sock at random, what is the probability it will be a color with the letter E somewhere in it?						
9.	Use a tree diagram to find how many combinations can be made from Max's eight colored socks and two different pairs of shoes: tennis or dress shoes.						
10.	A snow cone stand sells small, medium, and large snow cones. You can choose from grape, strawberry, or orange flavor. Make a tree diagram and list all of the different cones you can choose from in the space below.						
11.	<p>Brian has a 5 digit combination lock on his bicycle. He knows that the first four numbers are as listed below.</p> <table border="1" data-bbox="326 1234 1092 1293" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">6</td> <td style="text-align: center;">3</td> <td style="text-align: center;">2</td> <td style="text-align: center;">1</td> <td style="width: 40px;"></td> </tr> </table> <p>The digits may be repeated. How many numbers must Brian try before he is sure to open the lock on his bicycle?</p> <p style="text-align: center;">A. 10 B. 12 C. 336 D. 1000</p>	6	3	2	1		
6	3	2	1				
12.	Don tossed a coin 100 times and got heads 42 times. Based on Don's experiment, what is the experimental probability of heads? Please write your answer as a fraction in simplest form.						
13.	Using the information in the problem above, what is the experimental probability of tails? Please write your answer as a fraction in simplest form.						

Wayne is picking an outfit to wear to school. His choices are shown in the table below.

Shirt Color	Pants
White	Jeans
Red	Khakis
Blue	

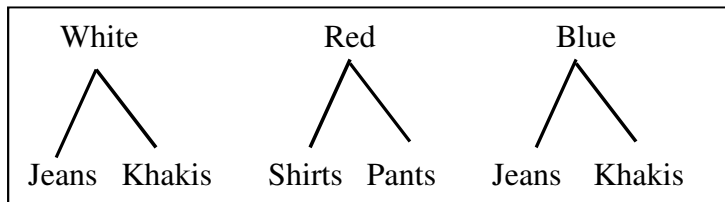
Which of the following diagrams shows all of the possible outcomes if Wayne picks one shirt and one pair of pants to wear?

A.

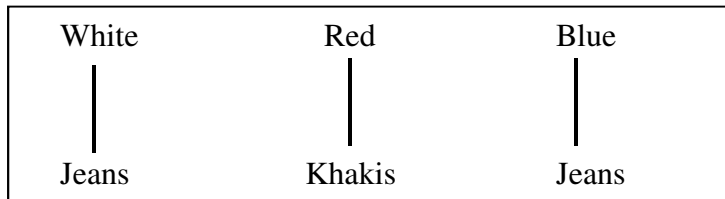


14.

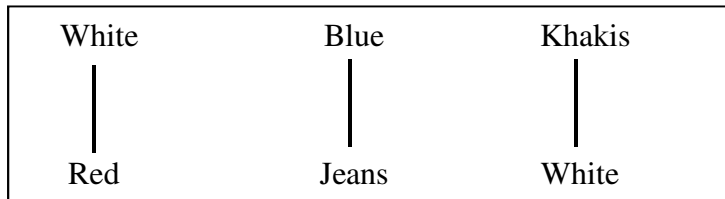
B.



C.



D.



15.	<p>Sam has a box of 100 colored drinking straws. The box contains 30 red straws, 35 green straws, 20 yellow straws, and 15 purple straws. If he selects 1 straw without looking what is the probability it will be yellow?</p> <p>A. $\frac{1}{5}$ B. $\frac{4}{5}$ C. $\frac{3}{10}$ D. $\frac{3}{7}$</p>													
16.	<p>Sally is picking a skittle out of a bag. If there are 10 red skittles, 12 purple skittles, 6 yellow skittles, and 4 blue skittles what is the probability she will pick a purple or blue skittle to eat?</p> <p>A. $\frac{1}{2}$ B. $\frac{3}{8}$ C. $\frac{1}{8}$ D. $\frac{1}{5}$</p>													
17.	<p>Ryan surveyed the 30 members of his class sixth grade class to find out their favorite color. He listed this information in the form of a table, as shown here.</p> <p style="text-align: center;">Favorite Colors</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">Color</th> <th style="text-align: center;">Number of Students</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Blue</td> <td style="text-align: center;">7</td> </tr> <tr> <td style="text-align: center;">Green</td> <td style="text-align: center;">4</td> </tr> <tr> <td style="text-align: center;">Yellow</td> <td style="text-align: center;">3</td> </tr> <tr> <td style="text-align: center;">Red</td> <td style="text-align: center;">10</td> </tr> <tr> <td style="text-align: center;">Orange</td> <td style="text-align: center;">6</td> </tr> </tbody> </table> <p>Based on this information what is the probability of a random student choosing red as their favorite color?</p>	Color	Number of Students	Blue	7	Green	4	Yellow	3	Red	10	Orange	6	
Color	Number of Students													
Blue	7													
Green	4													
Yellow	3													
Red	10													
Orange	6													

18. An ice cream stand sells small, medium, and large ice cream cones. You can choose from vanilla, chocolate, or strawberry ice cream. Make a tree diagram **and list** all of the different cones you can choose from in the space below.

19. Mona is buying a new car.

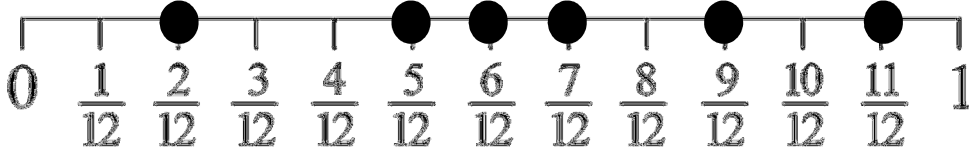
- She can choose a car with 2 doors or 4 doors.
- She can choose seat covers made of leather, fabric, or vinyl.
- She can choose a car color of silver, black, or white.

The list below shows some of the possible outcomes of 1 number of doors, 1 type of seat cover, and 1 color.

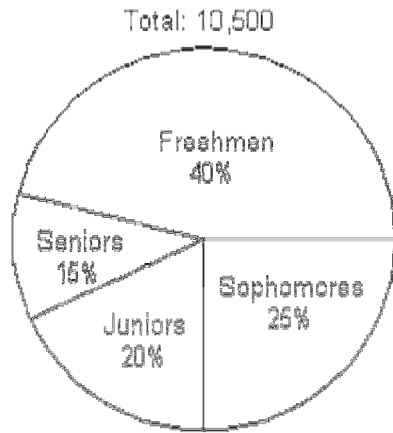
2 doors, leather, silver	2 doors, leather, black	2 doors, leather, white
2 doors, fabric, silver	2 doors, fabric, black	2 doors, fabric, white
4 doors, leather, silver	4 doors, leather, black	4 doors, leather, white
4 doors, fabric, silver	4 doors, fabric, black	4 doors, fabric, white

Create a list below to show all the other possible outcomes.

20. Aidan’s aquarium has 8 neon tetras, 4 swordtails, and 6 zebra danios. What is the probability that a fish caught at random from the aquarium is not a swordtail?

<p>1.</p>	<p>Dr. Giffin kept track of the fantasy football points scored by Robert Griffin III during his first eight games of the season:</p> <p style="text-align: center;">19, 26, 9, 16, 0, 9, 27, 8</p> <p>RGIII scored a total of 114 points. Which statement about Dr. Giffin’s data is NOT true?</p> <p>A. The median score for RG III is greater than 10. B. The mode of the scores for RGIII 9. C. The mean score for RGIII less than 15. D. The range of scores for RGIII is 19.</p>	
<p>2.</p>	<p>Mrs. Atkins loves bugs. She plotted the length (in centimeters) of different bugs she found crawling on the ground.</p>  <p>What is the range of the lengths of the bugs, in centimeters?</p>	
<p>3.</p>	<p>Mr. Wright loved having Matt Forte on his fantasy football team. These were Matt Forte’s first seven scoring games: 19, 24, 20, 22, 16, 16, 30</p> <p>What is the mean score for Matt Forte during these 7 games?</p> <p>A. 14 B. 16 C. 20 D. 21</p>	

The circle graph below represents students enrolled at a local college.

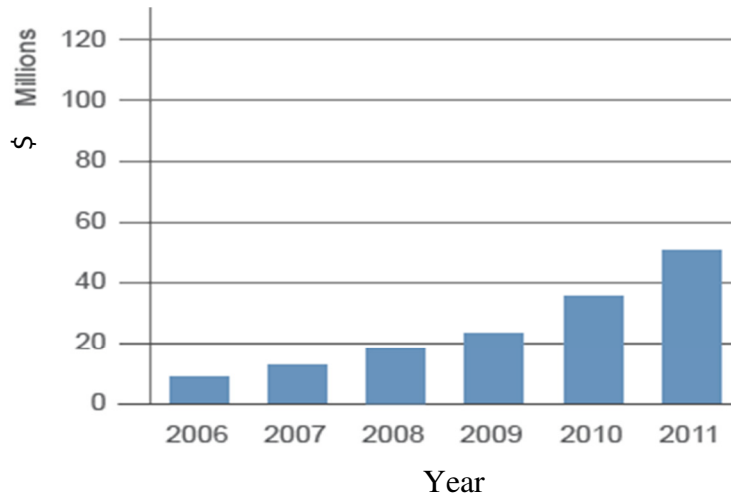


4.

What fraction of the students are freshman and sophomores?

- A. $\frac{13}{20}$ B. $\frac{55}{100}$ C. $\frac{3}{5}$ D. $\frac{7}{20}$

The graph below represents the amount of money spent to assist small, growing business from 2006 to 2011. If the money trend shown in the table continues, which is the best prediction of the money spent in 2012?

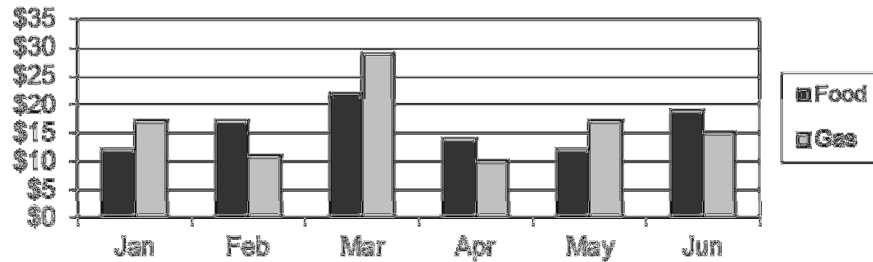


5.

- A. \$28 million C. \$70 million
B. \$45 million D. \$92 million

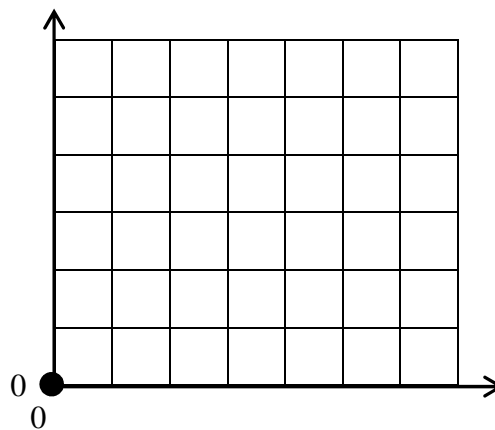
Use the graph below to answer the following questions.

Money Spent Each Month



6.	<p>If the final six months of the year were similar to the first six, how much money was spent on food for the entire year?</p> <p>A. \$96 B. \$122 C. \$154 D. \$192</p>	
7.	<p>Which statement is best supported by these data?</p> <p>A. In January, twice as much money was spent on gas compared to food. B. More money is spent each month on food than gas. C. The largest decrease in gas money was from March to April. D. The median cost month for food was in June.</p>	

8.	<p>Graph the points on the coordinate grid below and label the coordinates of each point.</p> <p>A (6,5) B (2,4) C (0,4) D (3,0)</p>
----	---



The stem-and-leaf plot below shows the ages of people at Mrs. Johnsen's family reunion.

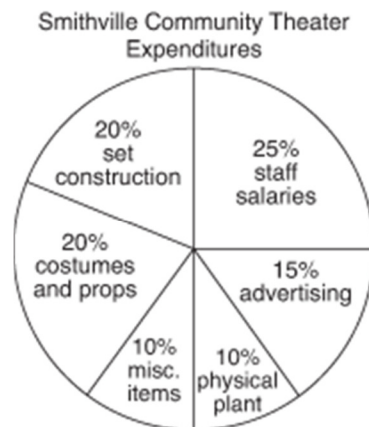
Ages of People at Family Reunion	
Stem	Leaf
0	1, 8, 9
3	2, 4, 7
4	5
5	1, 5
8	1

Key 5|1 = 51 years old

Which statement is best supported by the information in the plot?

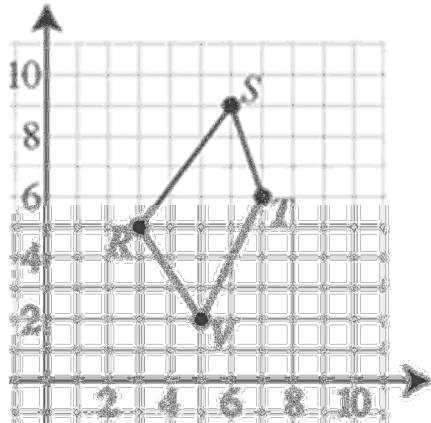
- A. More than half of the people were in their 30s at the reunion.
- B. The range of the people's ages at the reunion was 80 years.
- C. The median age of people at the reunion was 45 years.
- D. The youngest person at the reunion was 8 years old.

The circle graph below shows the expenditures at a community theater. Which of the following statements is **NOT** supported by the graph?



- A. The amount spent of costumes and props is twice the amount spent on physical plant.
- B. Staff salaries make up $\frac{1}{4}$ of the total cost at the theater.
- C. Set construction and costumes and props make up more than half of all the expenditures.
- D. Of all the money spent, $\frac{9}{10}$ is spent on items other than physical plant.

A polygon is shown below on the coordinate grid.

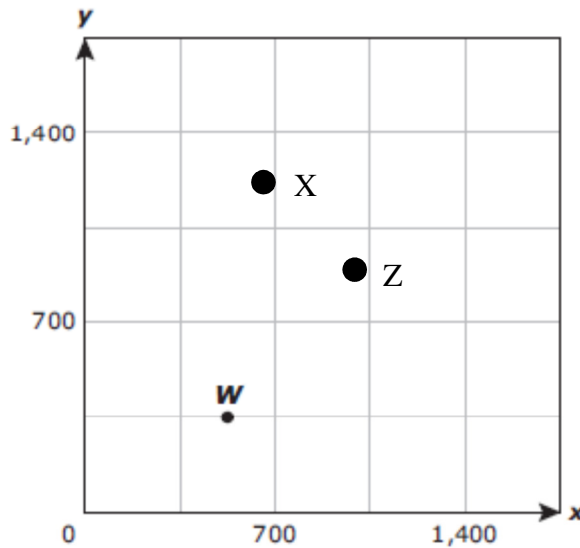


11.

If Point V is moved to the right $1\frac{1}{4}$ and up $2\frac{3}{4}$ where will the new point be located?

- A. $\left(6\frac{1}{4}, 4\frac{3}{4}\right)$ C. $\left(4\frac{1}{4}, 7\frac{3}{4}\right)$
 B. $\left(3\frac{1}{4}, 7\frac{3}{4}\right)$ D. $\left(8\frac{1}{4}, 8\frac{3}{4}\right)$

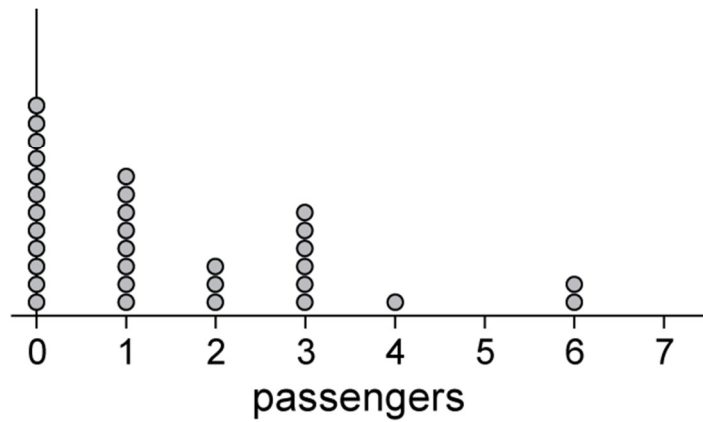
Which ordered pair appears to be located 350 units down and 700 units to the left of point Z?



12.

- A. (700, 175) C. (525, 350)
 B. (350, 525) D. (175, 700)

Valerie studied the new bus route that came near her house. She made the following line plot showing the number of passengers on the bus over a series of days.



13.

Which of the following statements is best supported by the data in the plot?

- A. There were twice as many days with 3 passengers as there were with 6 passengers.
- B. More than 50% of the days had two or more passengers.
- C. The median for the set of data is 3.
- D. The mean of the set of data is greater than the mode.

The audience on American Idol rated Mr. Mangham's audition on a scale of 1-10. The results were placed in the frequency table below.

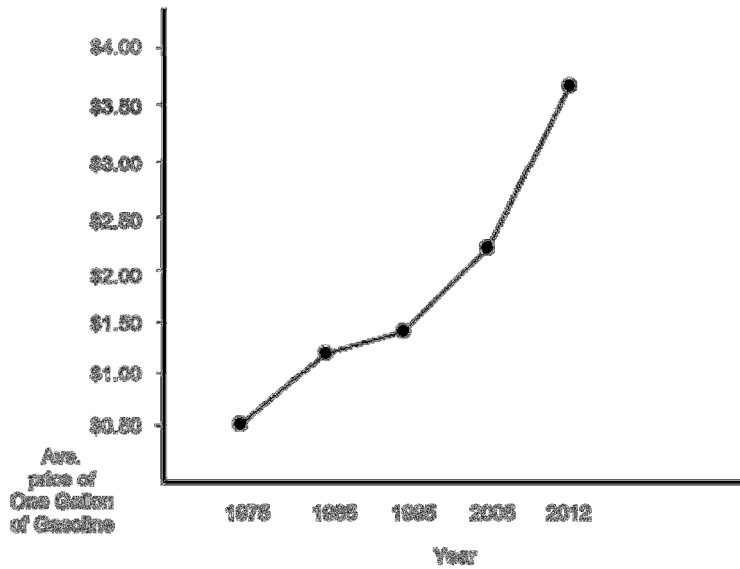
Marks	Tally	Frequency
1	///	3
2	///	3
3	//	2
4	//	2
5	//	2
6	////	5
7	////	4
8	////	5
9	//	2
10	//	2
Total		30

14.

Which of the following statements is true based on the data in the table?

- A. Mr. Mangham was the best singer in the history of American Idol.
- B. More than half of Mr. Mangham's scores were 6 or higher.
- C. Mr. Mangham's median score was an 8.
- D. Audience members that gave him a 1 need to have their hearing checked.

The line graph below the average price of a gallon of gas over time.



15.

Which of the following statements is best supported by the data in the graph?

- A. From 1975 to 2012 the average price of gas has been above \$2.50 for more than half of the time.
- B. From 1985 to 1995 the average price of gas decreased.
- C. The largest increase in the price of gas happened between 2005 and 2012.
- D. The price of gas has increased because more cars are on the road today compared to 1975.





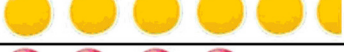




According to the class averages in the table below, which statement is true?

Student	Math	History	Science
Josh	89	91	92
Sarah	92	85	94

16.

- A. Sarah's median score is lower than Josh's median score.
- B. Josh's mean is higher than Sarah's mean.
- C. Sarah's range is less than Josh's range.
- D. Josh's history score is 6 points lower than Sarah's history score.

The pictograph below shows the number of Smarties, by color, that SpongeBob ate last Saturday.

Colour	Number of Smarties	Frequency
Green		7
Orange		8
Blue		5
Pink		6
Yellow		11
Red		8
Purple		7
Brown		3
	Key  = 2 smarties	

17.

Which statement below is best supported by the information in the table?

- A. The ratio of pink Smarties to orange Smarties is 4 to 3.
- B. The total number of Smarties he ate was $27\frac{1}{2}$.
- C. He ate two more yellow Smarties than purple Smarties.
- D. The median number of Smarties of the colors is 7.

18.

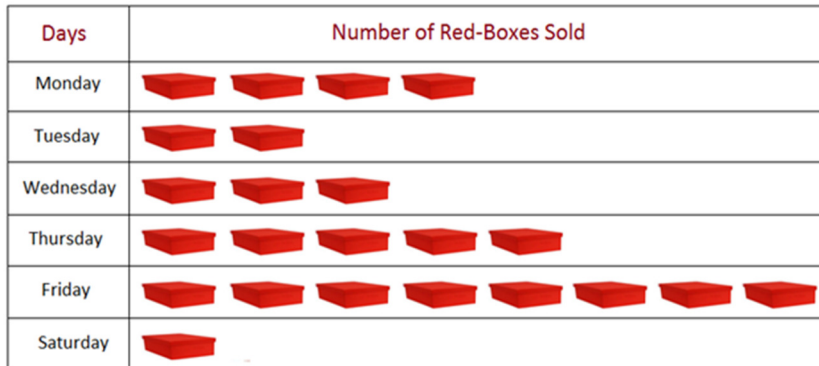
A librarian recorded the number of books that were checked out on each of the last 9 days shown below.


142, 136, 125, 148, 150, 152, 115, 131, 136

Which measure of data shows how much the number of checked out books varies of the last 9 days?

- A. Mean
- B. Median
- C. Mode
- D. Range

The pictograph below shows the number of red-boxes sold by Mrs. Fauatea in a given week.



Each  represents 3 red boxes.

19.

Which statement below is best supported by the information in the table?

- A. The ratio of boxes sold on Tuesday to boxes sold on Monday is 1:2.
- B. The total number of red-boxes sold was 23.
- C. The total boxes sold on Monday and Tuesday was 6.
- D. The ratio of boxes sold on Friday to boxes sold on Tuesday is 1:4.

A librarian recorded the number of books that were checked out on each of the last 9 days shown below.

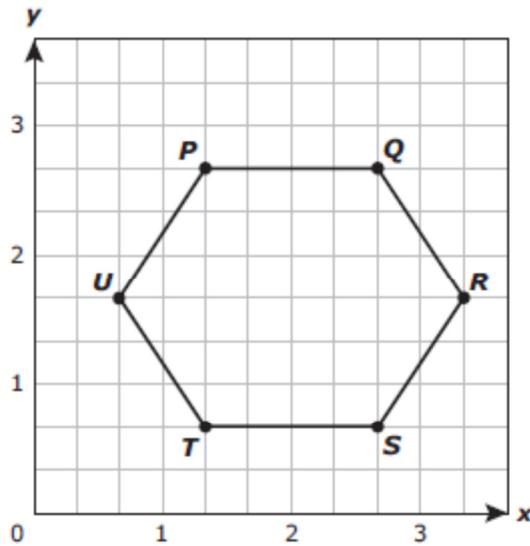
142, 136, 125, 148, 150, 152, 115, 131, 136

20.

Which measure of data represents the most common number of times library books were checked out on a single day?

- A. Mean
- B. Median
- C. Mode
- D. Range

A polygon is shown below on the coordinate grid.



21.

The list below shows the ordered pairs of representing the location of the five vertices (points) of the polygon.

$$\left(2\frac{2}{3}, \frac{2}{3}\right), \left(\frac{2}{3}, 1\frac{2}{3}\right), \left(1\frac{1}{3}, \frac{2}{3}\right), \left(1\frac{1}{3}, 2\frac{2}{3}\right), \left(3\frac{1}{3}, 1\frac{2}{3}\right)$$

Which vertex is NOT represented by an ordered pair in the list?

- A. Vertex P B. Vertex Q C. Vertex R D. Vertex S

Solve. Label your answer.

		Proportion	Answer
1.	12 cups equals how many pints?		
2.	632 milligrams equals how many grams?		
3.	You found a rock that weighed 9,000 grams. What is the weight of the rock in kilograms? A. 9 kg C. 900 kg B. 90 kg D. 9,000,000 kg		

4.	John's little brother Jimmy weighed 8 pounds 2 ounces at birth. What was his weight at birth in ounces?	
5.	At 9:00 AM the temperature on the thermometer showed 61°F. If the temperature rose 3°F every hour, what was the temperature at 1:00 PM?	
6.	Leslie used 6 fluid ounces of milk in her brownies. She used 7 fluid ounces of milk in her scalloped potatoes. If she used an additional 5 fluid ounces of milk in her hot chocolate, how many cups of milk did Leslie use?	
7.	The measurements in the list below have a common characteristic. <ul style="list-style-type: none"> • 25 days • 480 hours Which statement describes the common characteristic? A. Each measurement is equivalent to 2 weeks B. Each measurement is greater than 5 weeks. C. Each measurement is equivalent to 4 weeks. D. Each measurement is less than 4 weeks.	

Sarah kept track of how much time she spent on her homework 4 days last week.

Homework

Day	Time (minutes)
Monday	90
Tuesday	110
Wednesday	35
Thursday	75

13.

What is the total amount of time Sarah spend on her homework these 4 days?

- A. 3 hours 10 minutes C. 6 hours 10 minutes
 B. 5 hours 10 minutes D. 4 hours 20 minutes

14.

Martha ran at a pace of 8 miles per hour. If she ran from 4:30 PM to 6:00 PM, how far did she run?

15.

Measure the following line segment to the nearest half inch.



16.

The picture below is a scale drawing of a rectangular bulletin board. Use the ruler on the Mathematics Chart to measure the dimensions of the scale drawing to the nearest inch.



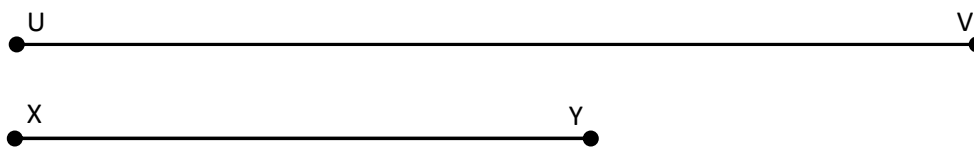
Scale
 1 inch = 2 feet

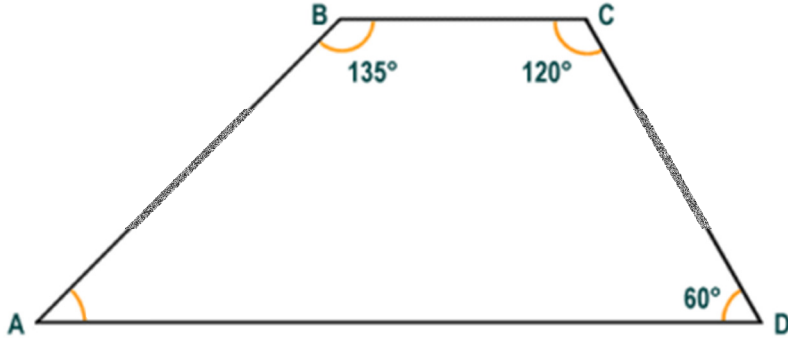
Which of the following is closest to the perimeter (the total distance around) in feet of the actual bulletin board?

- A. 11 ft C. 22 ft
 B. 5.5 ft D. 18 ft

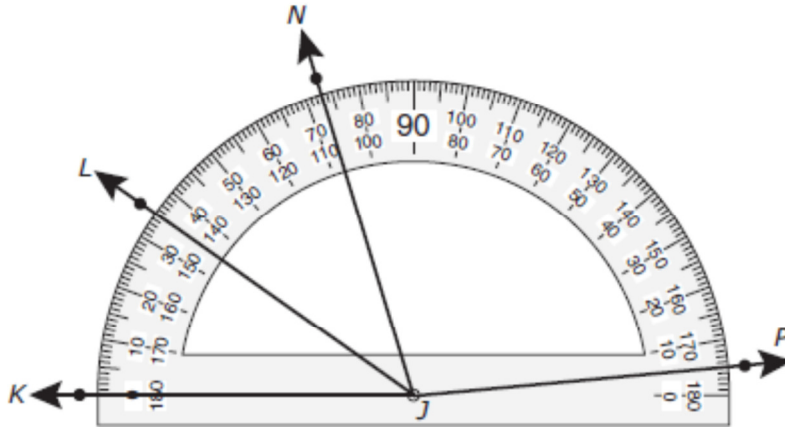
17.

Use the ruler on the Mathematics Chart to measure the lengths of the line segments below to the nearest inch. Which is the ratio of UV to XY ?



1.	This is the sum of the angles of any triangle.	
2.	This is the sum of the angles of any quadrilateral.	
3.	<p>Dora added the sum of the angles of an isosceles triangle to the sum of the angles of a rectangle. She then divided the sum by five and added the number of sides of an octagon to the quotient. If she did all this correctly, what was her final value?</p> <p>A. 80 B. 152 C. 116 D. 100</p>	
4.	<p>Which statement about figure $ABCD$ is true?</p>  <p>A. The difference between the measures of $\angle A$ and $\angle B$ is 75°. B. The difference between the measures of $\angle A$ and $\angle C$ is 15°. C. The sum of the measures of $\angle A$, $\angle C$, and $\angle D$ is 315°. D. The sum of the measures of $\angle A$, $\angle B$, and $\angle C$ is 300°.</p>	

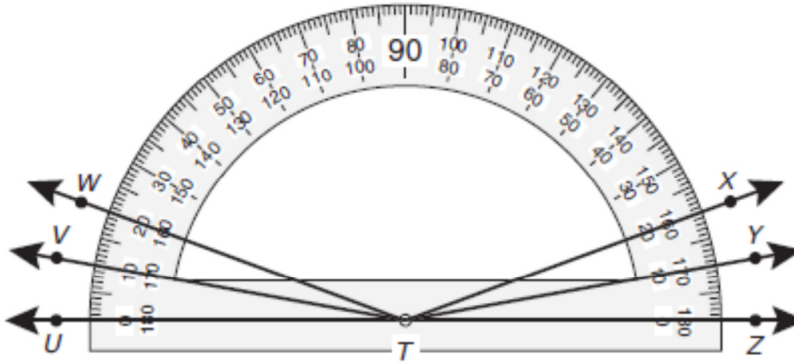
Angle NJP and angle KJL are shown below.



What is the difference between the measure of angle NJP and angle KJN to the nearest degree?

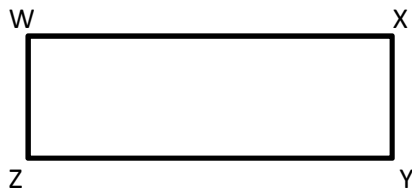
- A. 25° B. 29° C. 102° D. 73°

Which angle appears to have a measure of 170° ?



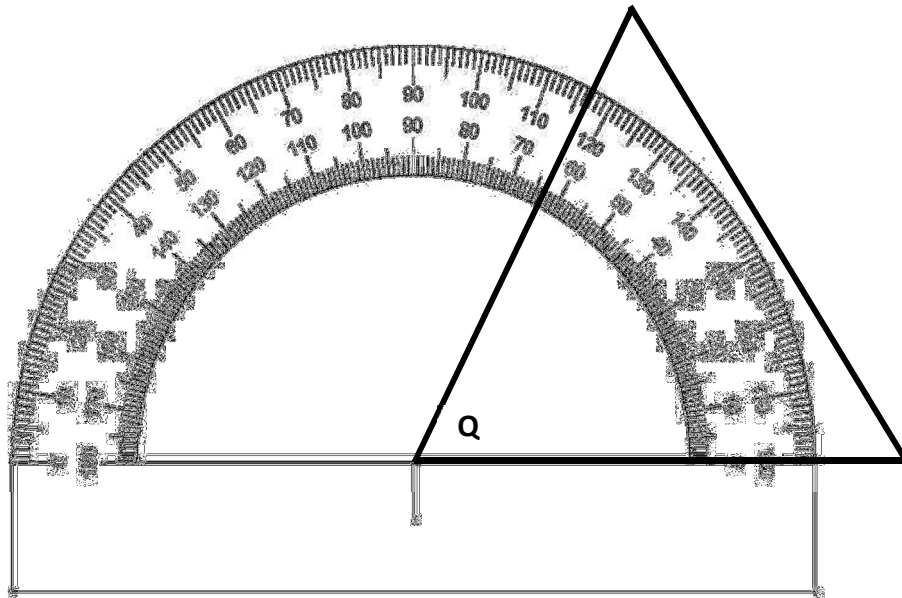
- A. $\angle WTX$ B. $\angle UTZ$ C. $\angle WTZ$ D. $\angle UTY$

If quadrilateral $WXYZ$ is a rectangle, which statement about this rectangle must be true?

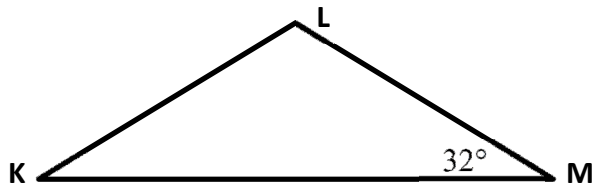


- A. The measures of $\angle W$ and $\angle X$ add up to 90° .
 B. $\angle Y$ and $\angle Z$ are not congruent.
 C. The measures of $\angle W$ and $\angle Y$ add up to 180° .
 D. All the angles are acute.

8. What is the measure of $\angle Q$ to the nearest degree?



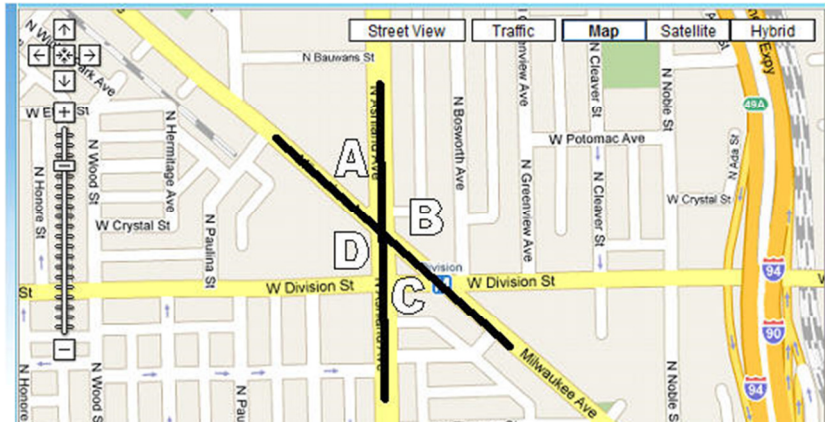
9. In the triangle below, $\angle K$ is congruent to $\angle M$.



What is the measure of $\angle L$?

- A. 116° B. 148° C. 58° D. 64°

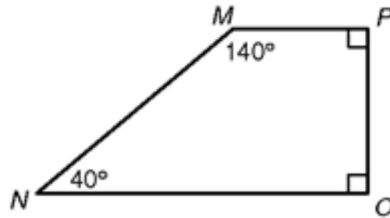
On the street map below what type of angle is Angle A?



10.

- A. Right B. Straight C. Obtuse D. Acute

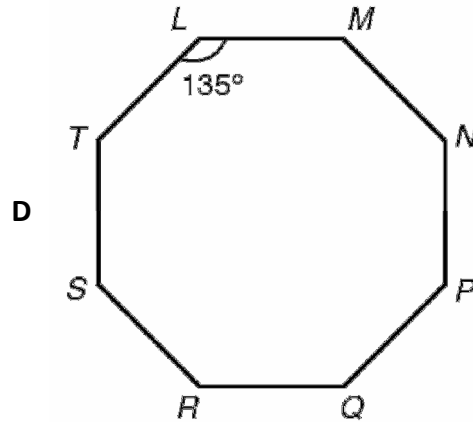
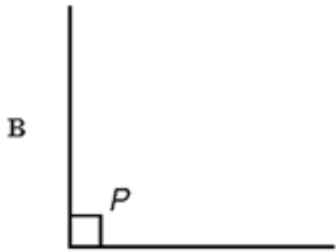
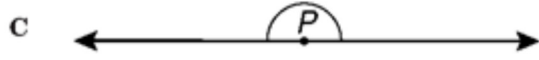
What kind of angle is angle M?



11.

- A. Right B. Straight C. Obtuse D. Acute

In which picture is angle P obtuse?



12.

The table below shows different golf clubs along with their degrees of loft. Based on the data in the table, which of the following statements is true about these golf clubs?

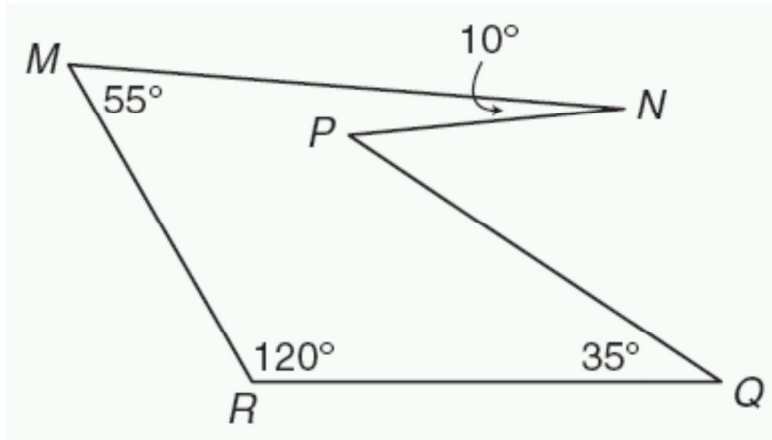
Golf Clubs

6 iron	32 degrees
7 iron	36 degrees
8 iron	40 degrees
9 iron	45 degrees
Pitching wedge	50 degrees

13.

- A. All the golf clubs have obtuse angles.
- B. The pitching wedge is the only golf club with an obtuse angle.
- C. The 9 iron is the only club with a right angle.
- D. All the golf clubs have acute angles.

14. Which angle in the figure is obtuse?



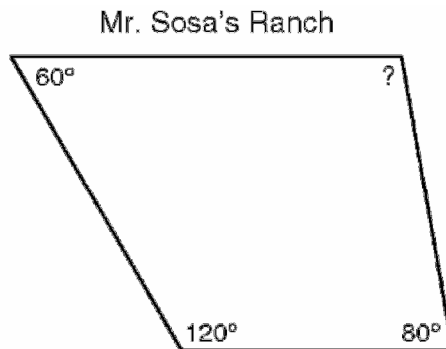
14.

15. A triangle has angles measuring 45° and 55° . What is the measure of the triangle's third angle?

- A. 80° B. 100° C. 125° D. 135°

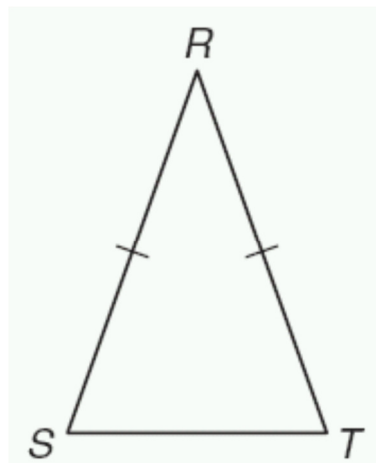
15.

16. What is the measure of the missing angle?

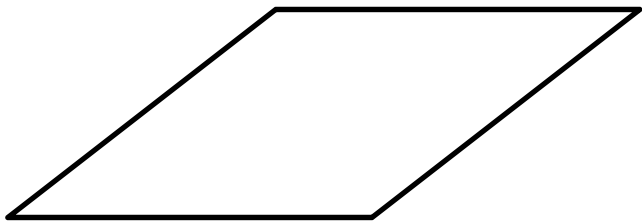
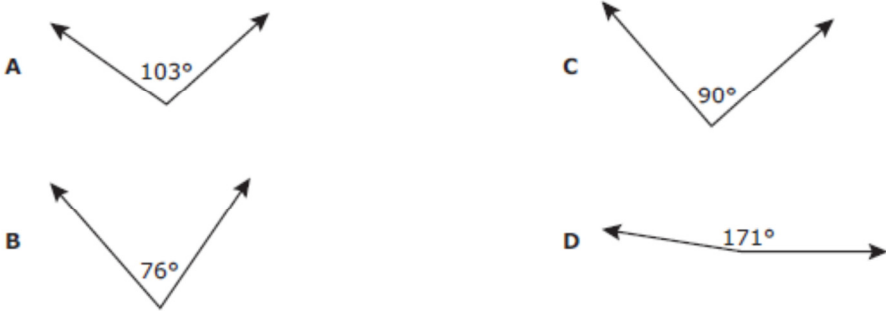
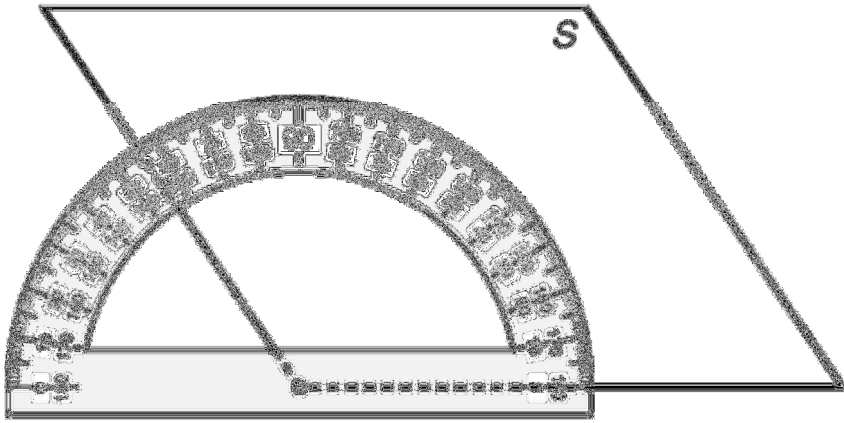


16.

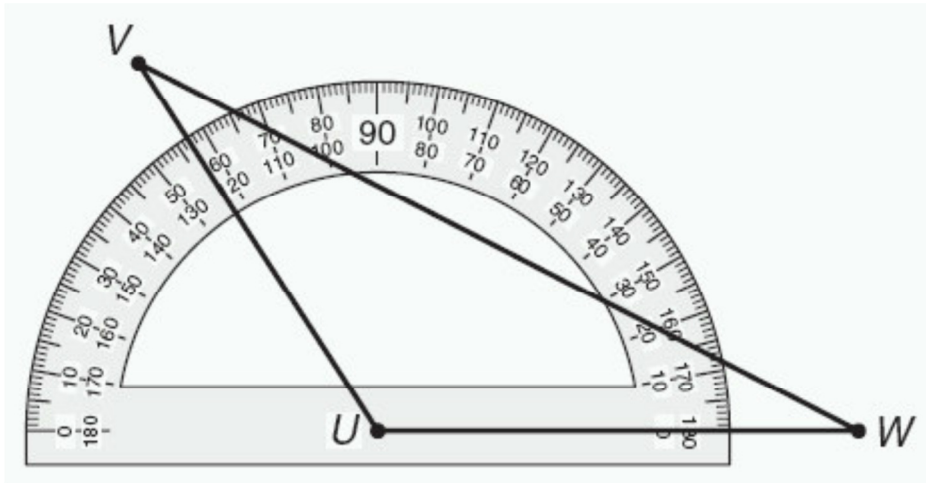
17. If angle R is 40 degrees, what is the measure of angle S?



17.

18.	<p>Look at the parallelogram shown below. Which of the following could be the measures of the angles, in degrees, of the parallelogram?</p>  <p>A. 85, 95, 95, 95 C. 40, 60, 100, 140 B. 40, 140, 40, 140 D. 120, 100, 70, 70</p>	
19.	<p>Mr. Underwood drew an angle that has the characteristics listed below.</p> <ul style="list-style-type: none"> • Its measure is less than 120°. • It is a right angle. <p>Which of the following could be the angle Mr. Underwood drew?</p> 	
20.	<p>Find the measure of angle S on the parallelogram below.</p>  <p>A. 136° B. 124° C. 64° D. 56°</p>	

Triangle VUW is shown below. What is the measure of $\angle VUW$ to the nearest degree?



21.

- A. 123° B. 57° C. 63° D. 137°

Which statement about polygons is NOT true?

22.

- A. If all the angles of a quadrilateral are congruent, then the shape is a rectangle.
B. If one angle on a triangle is obtuse, then both of the other angles are acute.
C. If a triangle is isosceles, then at least two of the angles must be equivalent.
D. If a quadrilateral has two right angles, then the other two angles must both be acute.


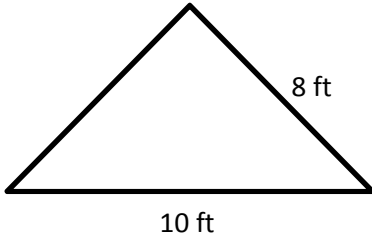
Which of the following statements about angle measures is true?

23.

- A. An angle that measures 180° is a straight angle.
B. An angle that measures 60° is a right angle.
C. An angle that measures 100° is an acute angle.
D. An angle that measures 82.54° is an obtuse angle.

Show all work on a separate sheet of paper.

Be sure to show all steps when utilizing a formula to compute a length or area.

1.	<p>A stop sign is a regular polygon with each side being 12.6 inches. What is the perimeter of a stop sign?</p> 	
2.	<p>Using the formula $A = \frac{1}{2}bh$, find the area of a triangle with:</p> <ul style="list-style-type: none">• a height of 5 m• a base four times the height	
3.	<p>A rectangle has a length of 10 ft. The width of the rectangle is 4 less than twice the length. What is the perimeter of the rectangle?</p>	
4.	<p>Find the perimeter of the isosceles triangle below.</p> 	

5. Mrs. Moore had a box to pack her secret surprise gift for her favorite math teacher. The box looks like the figure below. What is the volume of the box if all sides are congruent and all edges are 9 inches?



6. The table below shows the height and area of several triangles. All of these triangles have a base length of 6 feet.

Triangles

Height, h (feet)	Area, A (square feet)
5	15
10	30
15	45
20	60

Which of the following equations best represents the relationship between the height, h , and area, A , of these triangles?

A. $A = h + 5$

C. $A = \frac{h}{3}$

B. $A = h + 10$

D. $A = 3h$

7. The table below shows the length and area of several rectangles. Each rectangle has a width of 12 feet.

Rectangles

Length, h (feet)	Area, A (square feet)
4	48
6	72
8	96
10	120
n	

Which expression can be used to find the area of a rectangle with the same width and a length of n feet?

A. n^2

B. $12n$

C. $n + 24$

D. $\frac{n}{12}$

8. Which expression can be used to find the area of a triangle that has a base of 5 units and a height of n units?

Triangles

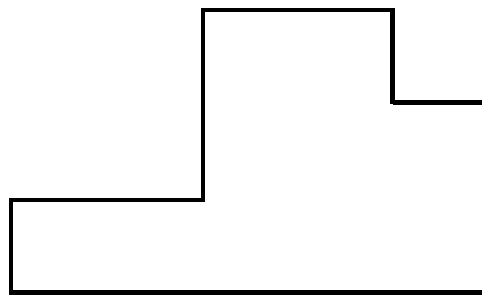
Height (units)	Base (units)	Area (square units)
4	5	10
8	5	20
12	5	30
16	5	40
n	5	?

- A. $\frac{n}{2}$ B. $\frac{5}{2}$ C. $5n$ D. $\frac{5n}{2}$

9. Mrs. Atkins found the length of one edge of a square to be 16 inches. Which of the following could be used to find P , the perimeter of the square?

- A. $\frac{16}{4}$ B. 4×16 C. $16 + 4$ D. $16 - 4$

10. The figure below represents the floor of a building. Use the ruler provided to measure the dimensions of the figure to the nearest $\frac{1}{2}$ inch.



Scale 1 in. = 20 ft

Which is closest to the perimeter in feet of the floor of the actual building?

- A. 160 ft B. 8 ft C. 7 ft D. 140 ft

The table below shows how the volume of a rectangular prism changes as its width increases and its length and height remain the same.

Rectangular Prisms

Width, w (inches)	Volume, V (cubic inches)
5	400
7	560
9	720
10	800

11.

Which of the following equations best represents the relationship between the rectangular prism's width, w , and its volume, V ?

- A. $V = 20w + 300$ C. $V = w \div 80$
B. $V = 80w$ D. $V = w + 395$

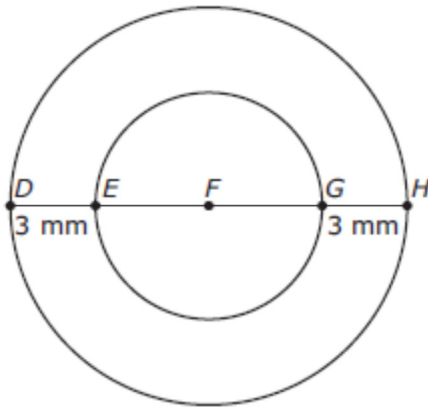
12.

You know the circumference of a circle. Which operation would you need to complete to determine the diameter of the circle?

- A. Add π C. Divide by π
B. Subtract π D. Multiply by π

13.

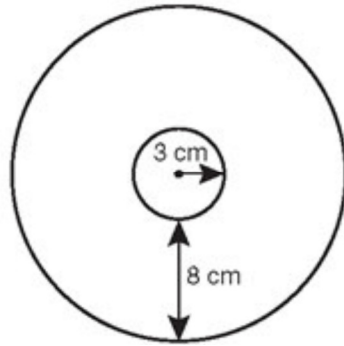
The diagram below shows 2 circles with the same center at point F . Points E , F , and G are on line segment DH . The diameter of the larger circle is 14 mm.



What is the radius of the smaller circle?

- A. 4 mm B. 7 mm C. 11 mm D. 8 mm

The drawing shows 2 circles that share a common center point.



14.

Which expression can be used to find the approximate circumference of the outer circle in centimeters?

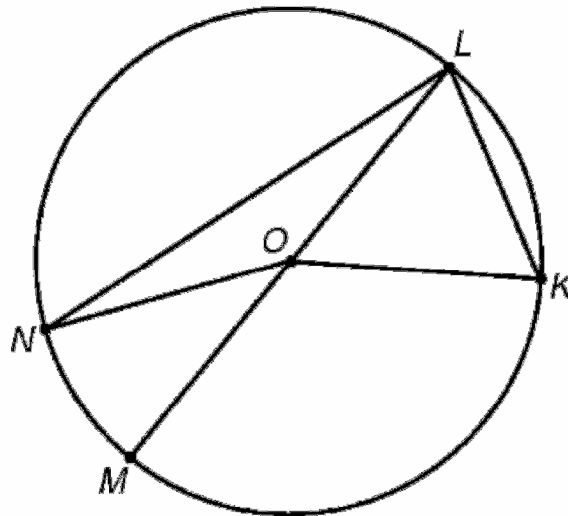
- A. $\pi(3+8)$ B. $\frac{1}{2}(3+8)$ C. $2\pi(3+8)$ D. $2(3+8)$

Some theater arts students made a circular railroad-crossing sign for a school play. The diameter of the sign was about 3 feet. How does the diameter compare to the circumference of the sign?

15.

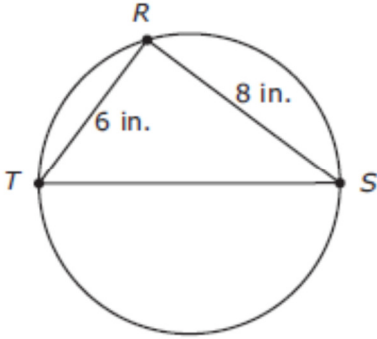
- A. The diameter is $\frac{1}{3}$ of the circumference.
 B. The diameter is $\frac{1}{2}$ of the circumference.
 C. The diameter is 2 times the circumference.
 D. The diameter is 3 times the circumference.

Which line segment is two times the length of segment \overline{OK} ?



16.

- A. \overline{LN} B. \overline{LM} C. \overline{LK} D. \overline{ON}

17.	<p>A circle has a diameter of 6 centimeters.</p> <p>Which expression can be used to find the approximate circumference of this circle?</p> <p>A. $\pi(6)$ B. $2(6)$ C. $2\pi(6)$ D. $2\pi(12)$</p>	
18.	<p>The circumference of a circle is 25.12 centimeters. Find the approximate length of the circle's radius.</p> <p>A. 4 cm B. 5 cm C. 8 cm D. 10 cm</p>	
19.	<p>The circumference of a circular garden is 32 feet. Which of the following expressions best represents the radius of the garden?</p> <p>A. $\frac{32}{\pi}$ C. $\frac{32}{2\pi}$</p> <p>B. $32 \cdot \pi$ D. $32 \cdot 2\pi$</p>	
20.	<p>In the figure below, the vertices of triangle RST are on a circle.</p> <div style="text-align: center;">  </div> <ul style="list-style-type: none"> • Line segment TS contains the center of the circle. • The perimeter of triangle RST is 24 inches. <p>What is the circle's radius?</p> <p>A. 8 inches, because $d = 24 - 8$ and $d \div 2 = r$ B. 32 inches, because $d = 24 - 8$ and $d \times 2 = r$ C. 20 inches, because $d = 24 - (8 + 6)$ and $d \times 2 = r$ D. 5 inches, because $d = 24 - (8 + 6)$ and $d \div 2 = r$</p>	

RANDOM QUESTIONS

	<p>The side lengths and perimeters of some regular polygons are shown in the table below.</p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th style="padding: 5px;">Side Length (inches)</th> <th style="padding: 5px;">Perimeter (inches)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 5px;">4</td> <td style="text-align: center; padding: 5px;">20</td> </tr> <tr> <td style="text-align: center; padding: 5px;">6</td> <td style="text-align: center; padding: 5px;">30</td> </tr> <tr> <td style="text-align: center; padding: 5px;">8</td> <td style="text-align: center; padding: 5px;">40</td> </tr> <tr> <td style="text-align: center; padding: 5px;">10</td> <td style="text-align: center; padding: 5px;">50</td> </tr> </tbody> </table> <p>What geometric figure is represented by the information in the table?</p>	Side Length (inches)	Perimeter (inches)	4	20	6	30	8	40	10	50																																									
Side Length (inches)	Perimeter (inches)																																																			
4	20																																																			
6	30																																																			
8	40																																																			
10	50																																																			
	<p>The weight limit for an elevator is 2,000 pounds. Which statement is best supported by this information?</p> <p>A. The elevator can carry more than 20 adults. B. The elevator can carry more than 20 crates that weigh 100 pounds each. C. The elevator can carry up to 8 people who each weigh as much as 250 pounds. D. The elevator can carry twice as many children as adults.</p>																																																			
	<p>The line plot shows the homework grades of the students in Mrs. Smith’s class.</p> <div style="text-align: center; margin: 10px 0;"> <table style="margin: 0 auto; border-collapse: collapse;"> <tr><td></td><td></td><td></td><td style="text-align: center;">X</td><td></td></tr> <tr><td></td><td></td><td></td><td style="text-align: center;">X</td><td></td></tr> <tr><td></td><td></td><td></td><td style="text-align: center;">X</td><td></td></tr> <tr><td></td><td></td><td style="text-align: center;">X</td><td style="text-align: center;">X</td><td></td></tr> <tr><td></td><td></td><td style="text-align: center;">X</td><td style="text-align: center;">X</td><td></td></tr> <tr><td></td><td></td><td style="text-align: center;">X</td><td style="text-align: center;">X</td><td style="text-align: center;">X</td></tr> <tr><td style="text-align: center;">X</td><td style="text-align: center;">X</td><td style="text-align: center;">X</td><td style="text-align: center;">X</td><td style="text-align: center;">X</td></tr> <tr><td style="text-align: center;">X</td><td style="text-align: center;">X</td><td style="text-align: center;">X</td><td style="text-align: center;">X</td><td style="text-align: center;">X</td></tr> <tr><td style="text-align: center;">X</td><td style="text-align: center;">X</td><td style="text-align: center;">X</td><td style="text-align: center;">X</td><td style="text-align: center;">X</td></tr> <tr><td style="text-align: center;">A</td><td style="text-align: center;">B</td><td style="text-align: center;">C</td><td style="text-align: center;">D</td><td style="text-align: center;">F</td></tr> </table> </div> <p>Which statement is supported by the information in the line plot?</p> <p>A. The same number of students received a B as received a D. B. Eighteen students received a C or higher. C. The same number of students received a D or an F as received an A or a B. D. Sixteen students received a C or lower.</p>				X					X					X				X	X				X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	A	B	C	D	F	
			X																																																	
			X																																																	
			X																																																	
		X	X																																																	
		X	X																																																	
		X	X	X																																																
X	X	X	X	X																																																
X	X	X	X	X																																																
X	X	X	X	X																																																
A	B	C	D	F																																																
	<p>Charlie has 1 red marble, 1 blue marble, 1 yellow marble, and 1 green marble in a bag. He picked 2 marbles at random from the bag. Create a tree diagram to show all the possible color combinations of the 2 marbles that Charlie picked.</p>																																																			
	<p>A certain regular polygon is made of congruent equilateral triangles. The table shows the relationship between area of the triangle and the area of the polygon it is part of.</p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th style="padding: 5px;">Area of triangle</th> <th style="padding: 5px;">Area of polygon</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 5px;">3</td> <td style="text-align: center; padding: 5px;">18</td> </tr> <tr> <td style="text-align: center; padding: 5px;">4</td> <td style="text-align: center; padding: 5px;">24</td> </tr> <tr> <td style="text-align: center; padding: 5px;">5</td> <td style="text-align: center; padding: 5px;">30</td> </tr> <tr> <td style="text-align: center; padding: 5px;">6</td> <td style="text-align: center; padding: 5px;">36</td> </tr> <tr> <td style="text-align: center; padding: 5px;"><i>n</i></td> <td></td> </tr> </tbody> </table> <p>Write an expression to find the area of a similar polygon made of triangles with an area of <i>n</i> square units.</p>	Area of triangle	Area of polygon	3	18	4	24	5	30	6	36	<i>n</i>																																								
Area of triangle	Area of polygon																																																			
3	18																																																			
4	24																																																			
5	30																																																			
6	36																																																			
<i>n</i>																																																				
	<p>The ratio of red rosebushes to yellow rosebushes in the school garden is about 3 to</p>																																																			

	4. If there were 36 yellow rosebushes, about how many red rosebushes would there be?	
	There were 14 boats and 42 people registered for the boat race. Write a ratio that accurately compares the number of people to the number of boats.	
	<p>If the ratio of boys to girls in the sixth-grade chorus is 2 to 3, which of these shows possible numbers of the boys and girls in the chorus?</p> <p>A. 20 boys, 35 girls B. 24 boys, 36 girls C. 35 boys, 20 girls D. 36 boys, 24 girls</p>	
	<p>For a science project Ruth is keeping track of the calories her father eats at breakfast. The table shows the number of calories he ate at breakfast on Monday.</p> <p>Oat Cereal, 1 serving, 80 calories Skim Milk, 1 serving, 40 calories Orange Juice, 1 serving, 86 calories Banana, 1 serving, 105 calories Flavored coffee, 1 serving, 55 calories</p> <p>Which is closest to the number of calories Ruth's father ate at breakfast on Monday?</p> <p>A. 200 cal B. 300 cal C. 400 cal D. 500 cal</p>	