1. The cylinder below is made of paper. Draw a 1-piece pattern that could be cut out and folded to form the cylinder.
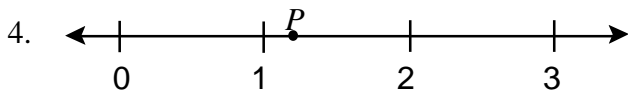
2. Which graph is represented by the inequality $y > -4$?

A.

B.

C.

D.
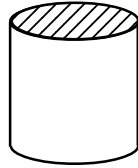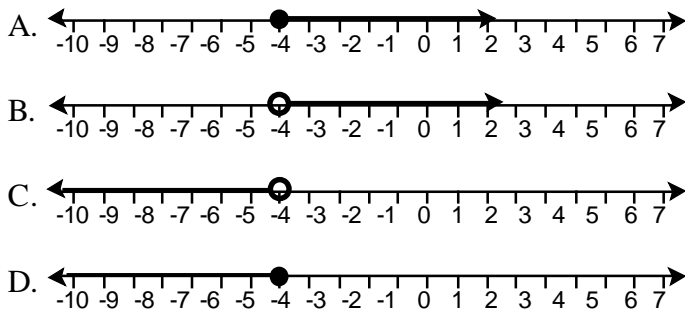
3. Write the equation for "Three less than four times a number is eight."

4.
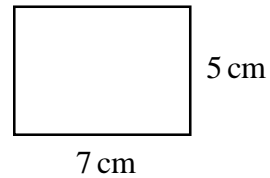
What is the best estimate of the number corresponding to P?
   A. 1.1
   B. 1.2
   C. 1.4
   D. 1.5

5. Find y^3 when $y = 7$.

6. A light-year is the distance light travels in one year. Light travels at a speed of about 3×10^5 kilometers per second.   About how many kilometers does light travel in a light year?

7. Find the perimeter of the figure below.

5 cm

7 cm

8. At Best Buy, the price (P) of a VCR was discounted 30%. The original price was $160.00. Which of the following equations can be used to find the discount price?

   A. $P = \$160.00 + .3$
   B. $P = \$160.00 \times .3$
   C. $P = \$160.00 \times .7$
   D. $P = \$160.00 - .3P$

9. If the ratio 7 to 13 is the same as the ratio x to 52, what is the value of x?

10. Find the length of side A in the right triangle below.

10 cm

A

8 cm
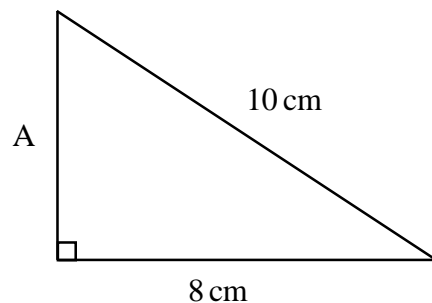
1. What is the solution to the equation below?

$$\frac{1}{5}t + 4 = 14$$

A. $t = 2$
B. $t = 9$
C. $t = 50$
D. $t = 90$

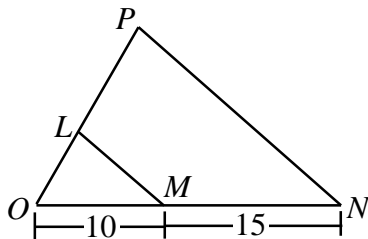2. Put the following fractions in order from least to greatest:

$$\frac{2}{3} \quad \frac{1}{2} \quad \frac{2}{5} \quad \frac{1}{7}$$

3. Simplify the following expression:

$$10^3 \cdot 10^5$$

A. 10^{-2}
B. 10^2
C. 10^8
D. 10^{15}

4. $\triangle LOM$ is similar to $\triangle PON$.

What is the ratio of the lenghts of the sides of $\triangle LOM$ to the lengths of the correspon-ding sides of $\triangle PON$.

A. $\frac{2}{5}$

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

C. $\frac{2}{3}$

D. $\frac{3}{2}$
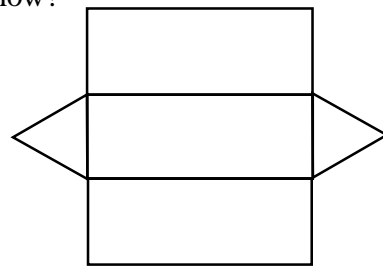
5. 25% of 1200 is _____.

6. Below are Miranda's quiz scores.

94, 90, 88, 79, 100, 93, 98

What is the median of her scores?
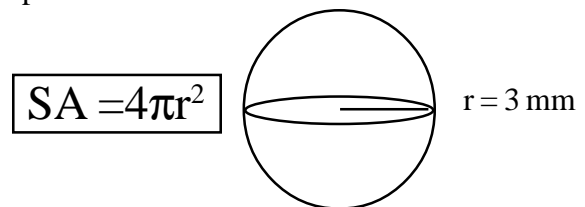
7. Which solid can be formed from the net below?

A rectangular prism
B triangular pyramid
C rectangular pyramid
D triangular prism

8. 6.42 x 10^{-5}

A .000642
B .00642
C 642,000
D 6,420,000

9. What is the surface area of the sphere below?

$$SA = 4\pi r^2$$ $r = 3$ mm

10. $-\frac{3}{8}$ _____ $-\frac{3}{4}$

Complete with $>$, $<$, or $=$.
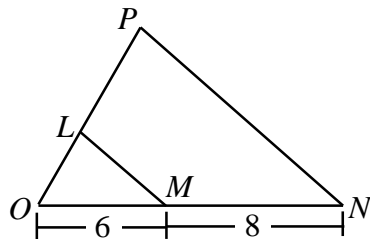
1. What is the slope of the line represented by the equation $y = -2x + 3$?

A. 2

B. -2

C. 3

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

2. How many edges does a cube have?

3. 3.89×10^4

A. 389
B. 3890
C. 38,900
D. 389,000

4. $\triangle LOM$ is similar to $\triangle PON$.

What is the ratio of the lenghts of the sides of $\triangle LOM$ to the lengths of the correspon-ding sides of $\triangle PON$.

A. $\frac{3}{4}$

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

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

D. $\frac{3}{7}$

5. Evaulate 5^3.

6. Below are Miranda's quiz scores.
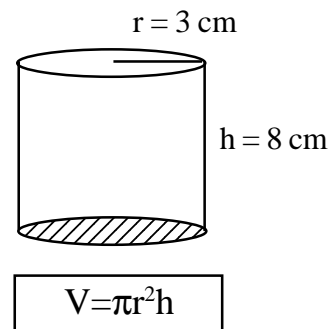
   94, 90, 88, 79, 94, 93, 98

   What is the **mode** of her scores?

7. Pyramids are named by their...

A. faces
B. base
C. edges
D. height

8. What is the volume of the cylinder below?

r = 3 cm

h = 8 cm

$$V = \pi r^2 h$$

9. Put the following in order from least to greatest:

   $\frac{3}{5}$ .66   0.5 $\frac{3}{8}$

10. Simplify.

   $$\frac{m^2 n^3}{mn^2}$$
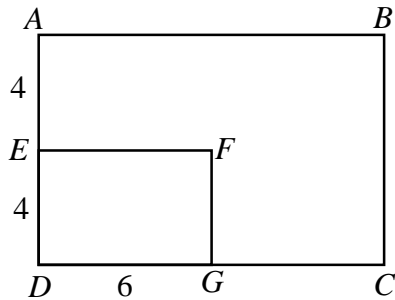
1. Simplify.

$$\frac{2x^4y^3}{x^2y^2}$$

2. ☐*ABCD* is similar to ☐*EFGD*.
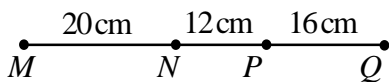

What is the length of side $\overline{DC}$?

A. 6

B. 10

C. 12

D. 14

3. Evaluate 3^5.

4. If $2(x + 7) = 16$, what is the value of x?

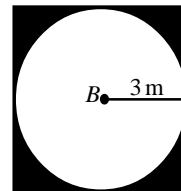5. What is the distance between the midpoint of MN and the midpoint of PQ shown below?

A. 18 cm
B. 24 cm
C. 30 cm
D. 36 cm

6. Which of the equations below give the rule for finding the numbers in the column *y*?

x	y
1	9
2	13
3	17

A $y = x + 8$
B. $y = 2x + 7$
C. $y = 4x + 5$
D. $y = x + 6$

7.

$$\textbf{Area}_{\textbf{circle}} = \boldsymbol{\pi r^2}$$
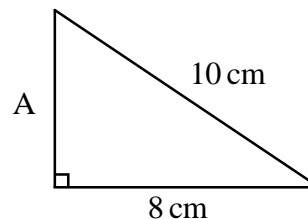
In the figure above, a circle with center *B* and a radius length of 3 m is inscribed in a square. What is the area of the shaded region? Round you answer to the nearest hundreth.

8. How many faces does a cylinder have?

A. 0
B. 1
C. 2
D. 3

9. Find the length of side A in the triangle below.

10. $6.25 \times 10^{-6} =$
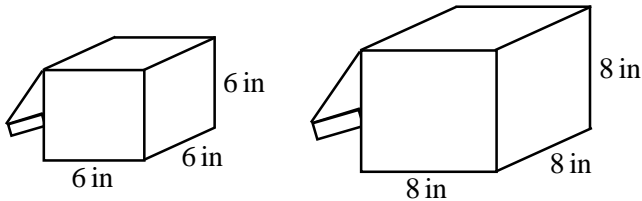
A. 625,000
B. 6,250,000
C. .0000625
D. .00000625

1. Mona is sending a rectangular prism-shaped box to her grandmother. How many edges does the box have?

A. 4
B. 8
C. 12
D. 16

2. Simplify.

$$\frac{4a^4b^3}{a^2b^2}$$

3. If 3 pounds of fudge fit into the small candy box below, about how many pounds will fit into the large candy box?
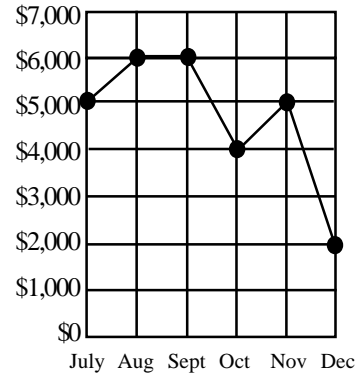

A. 5 pounds
B. 7 pounds
C. 9 pounds
D. 12 pounds

4. Write in expanded notation:

$$3.42 \times 10^7$$

5. $3n + 6 = 12$ can be expressed as...

A. Twelve is three more than a number and six.
B. Three times a number and six is twelve.
C. The sum of three times a number and six is twelve.
D. Three times the sum of a number and six is twelve.

6. The graph shows the profits for the Action Video Company for July to December.

Based on the information given in the graph, which statement is a valid conclusion?

A. The company employed 4000 more people in Sept. than Dec.
B. The company's profits were the lowest in Nov.
C. The company's profits in Aug. were 20% higher than profits in July.
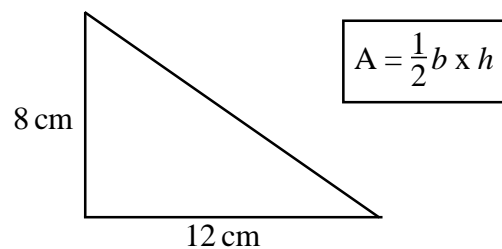D. The company's profits increased more from July to Aug. than they did from Oct. to Nov.

7. Given $3x + 4 = 31$, solve for x.

8. Ground beef costs $2.59 per pound. What is the cost of 0.93 pound of ground beef?

A. $3.52
B. $2.78
C. $2.47
D. $2.41

9. Annie ate 60% of the cookies she made. If she made 30 cookies, how many did she eat?

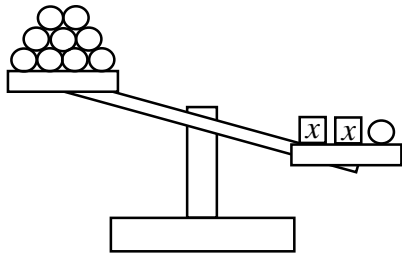10. Find the area of the triangle below.

$$A = \frac{1}{2}b \times h$$

1. Fifteen less than 12 times a number is 249. What is the number?

A. 17.4
B. 19.5
C. 22
D. 27

2. Simplify.

$$\frac{5g^4h^5}{g^2h^3}$$

3. Which inequality is represented by the balance below?

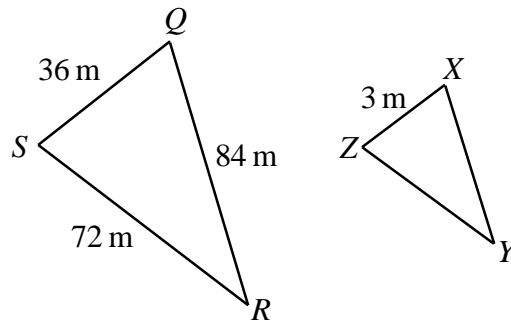A. $x < 3$
B. $x > 3$
C. $x < 4$
D. $x > 4$

4. Write in scientific notation:

24,600,000

5. The student store sold 25 blue pens, 20 black pens, and 10 red pens. What is the ratio of the number of red pens that were sold to the number of black pens that were sold?

A. 2 to 1
B. 1 to 2
C. 2 to 5
D. 4 to 5

6. $\triangle QRS$ is similiar to $\triangle XYZ$.

What is the length of side $\overline{YZ}$?

7. Which geometric solid has bases that are parallel and congruent?

A. a sphere
B. a cyclinder
C. a triangular pyramid
D. a cone

8. Put the following fractions in order from least to greatest:

$$\frac{1}{2} \quad \frac{5}{8} \quad \frac{6}{9} \quad \frac{1}{4}$$

9. There are 5 students in Tamika's reading group. The median score made by the group on the last test was 85. The scores for 4 of the students are shown below.

85, 80, 95, 80

Which could have been the score for the 5th student?

A. 70
B 75
C. 80
D. 90

10. Find x^3 if $x = 5$.

1. Nan's first computer had 2^7 megabytes of RAM (Random Access Memory). What is the value of 2^7?

A. 14
B. 27
C. 128
D. 256

2. Write in scientific notation.

$$\boxed{32,100,000}$$

3. A box is 10 inches long, 3 inches wide, and 4 inches high. What is the surface area, in square inches, of the closed box.

$$\boxed{SA_{\text{rectangular prism}} = 2(lw + wh + lh)}$$

A. 120 sq. in.
B. 134 sq. in.
C. 140 sq. in.
D. 164 sq. in.

4. Maria had the following quiz scores:
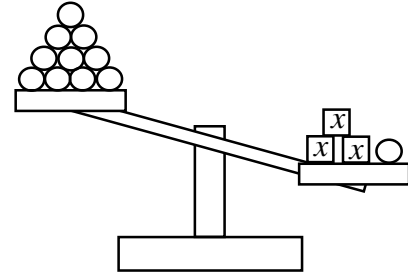
$$\boxed{82, 89, 90, 92, 98, 100, 92}$$

What is the mode of Maria's scores?

5. Last week, Jenna earned $84 for working 14 hours. This week, she earned $120 at the same hourly rate. Exactly how many hours did Jenna work this week?

A. 6
B. 14
C. 20
D. 36

6. How many faces does a cone have?

7. Which inequality is represented by the balance below?
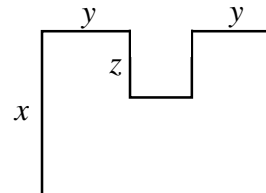

A. $x < 3$
B. $x > 3$
C. $x < 4$
D. $x > 4$

8. Put the following decimals in order from least to greatest:

.004   .041   .410   .0407

9. A square with side lengths of z was cut from a rectangle to form the polygon shown below.

Which expression represents the perimeter of the polygon?

A. $2x + 4y + 2z$
B. $2x + 4y + 3z$
C. $2x + 4y + 4z$
D. $2x + 4y + 6z$

10. Taft ordered candy bars to sell as a fundraiser. The table shows the school's cost for candy bars.
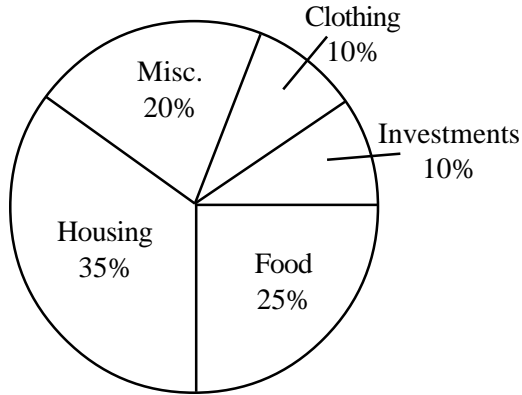
Taft's cost for Candy Bars				
Quantity Ordered	500	1000	1500	2000
Price Each	$0.91	$0.88	$0.85	$0.82

How much greater is the total cost for 2000 candy bars than the total cost for 500 candy bars.

1. Use the circle graph to determine how much the Lewis family spends on food each week if their total weekly earnings are $500.
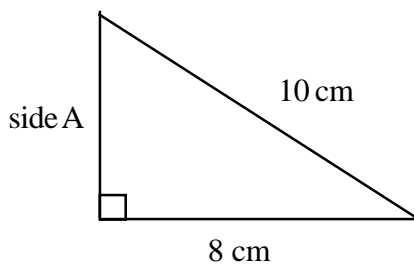

2. $\frac{x}{2} < 7$ is equivalent to

   A. $x < \frac{7}{2}$

   B. $x < 5$

   C. $x < 14$

   D. $x > 14$

3. How many faces does a triangular prism have?
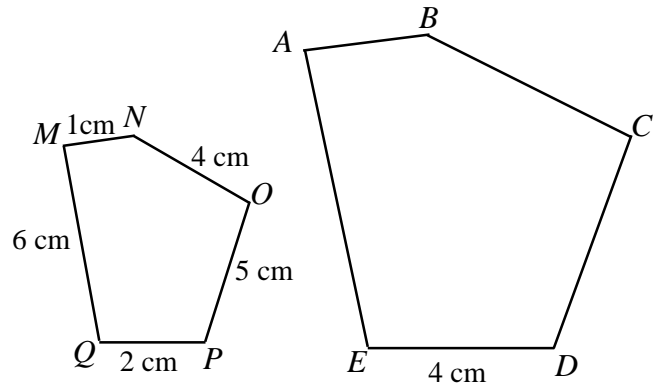
4. Which of these numbers is between 0.07 and 0.08?

A. 0.00075
B. 0.0075
C. 0.075
D. 0.75

5. Find the length of side A in the triangle below.

6. Figure *MNOPQ* is similar to *ABCDE*.

What is the measure of $\overline{BC}$?

A. 4 cm
B. 6 cm
C. 8 cm
D. 10 cm

7. Write 23, 400,000 in scientific notation.

8. Chelsea repairs computers. She charges $25.00 for a house call that is more than 30 miles away plus $40.00 per hour. If h represents the hours she must work on a computer 45 miles from her home, which of the following expressions could be used to find her fee, f?

A. $f = 40h$
B. $f = 65h$
C. $f = 25h + 40$
D. $f = 40h + 25$

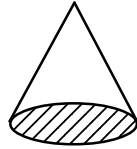9. Evaulate x^4 if $x = 3$.

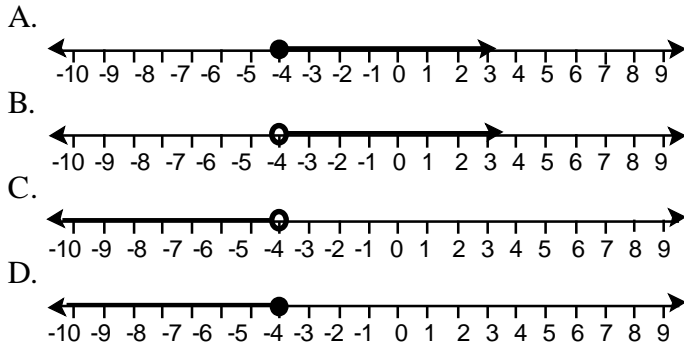10. $\frac{5}{8}$ is equivalent to...

A. .58
B. .60
C. .65
D. .625

1. The cone below is made of paper. Draw a 1-piece pattern that could be cut out and folded to form the cone.

2. Which graph is represented by the inequality $y \geq -4$?

A.

-10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9

B.

-10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9

C.

-10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9

D.

-10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9

3. Write the equation for "Two less than six times a number is eight."
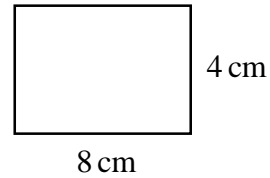
4. A fly weighs 6.219834 x 10^{-4} kilograms. What is the closest estimate of that weight?

A 0.006 kg

B 0.0006 kg

C 0.00006 kg

D 0.000006 kg

5. What is the slope of the line represented by $y = -\frac{1}{2}x + 3$?

6. Find y^3 when $y = 6$.

7. Find the perimeter of the figure below.

4 cm

8 cm

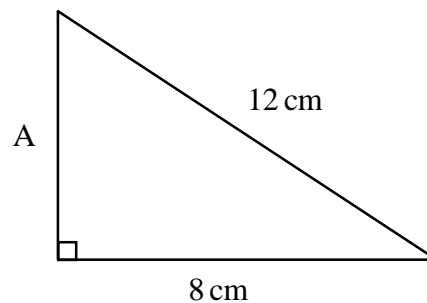8. The table shows some values of x and y, where x is proportional to y.

x	4	8	Q
y	9	P	45

What are the values of P and Q?

A $P = 40$ and $Q = 13$

B $P = 18$ and $Q = 17$

C $P = 40$ and $Q = 18$

D $P = 18$ and $Q = 20$

9. The function $C(h) = 6h + 25$ represents the cost of renting a popcorn machine for the school fun fair, where h is the number of hours the machine is at school. What will be the total cost of having the popcorn machine for 3 hours?

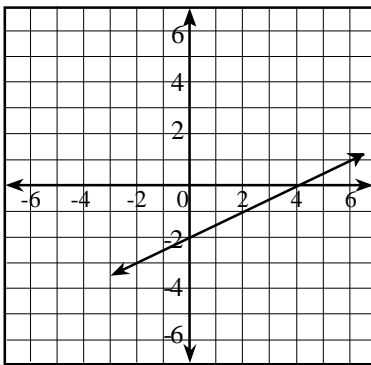10. Find the approximate length of side A in the right triangle below.

12 cm

A

8 cm

1. Stacey earns $15 per week plus $.50 for each customer on her paper route. She wants to earn at least $25 each week. What equation can she use to find x, the number of customers she needs to make exactly $25?

A $x + 15 = 25$
B $0.50x + 15 = 25$
C $2x + 15 = 25$
D $50x + 15 = 25$

2. What is the equation of the line below?

3. What are the solutions to the following inequality?

$$2x + 6 < 4$$

A $x < 1$
B $x < -1$
C $x > 1$
D $x > -1$

4. Mrs. Jones has a total of 325 papers to grade. She has graded $\frac{2}{5}$ of the papers. How many papers does Mrs. Jones have left to grade?
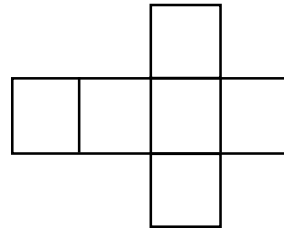
5. Light travels at a speed of 299,792,458 meters per second. Which is closest in value to the speed of light?

A 2.9×10^6 m/s
B 2.0×10^8 m/s
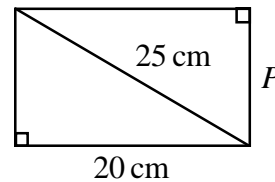C 3.0×10^6 m/s
D 3.0×10^8 m/s

6. If $\dfrac{m^9}{m^6} = 8$, what is the value of $\dfrac{m^5}{m^2}$?

A   3
B   7
C   8
D   14

7. The pattern below can be folded into which three-dimensional polyhedron?

8. What is the length of side P in the figure below?

A 6.7 cm
B 12 cm
C 15 cm
D 45 cm

9. The area of a rectangular playing field is 5000 square feet. The width of the field is half its length. What is the width of the playing field?

$$A = lw$$

10. For which data set is the median greater than the mode?

A 10, 7, 5, 3, 10
B 26, 31, 28, 26, 22
C 9, 0, 1, 9, 3
D 16, 12, 21, 12, 14

8th Grade Math   **DO NOT WRITE ON THIS QUIZ!!!**
**Continuous Improvement**
Quiz 11

1. Clyde's truck travels an average distance of 12 miles per gallon of gas. When full, his truck's tank holds 40 gallons of gas. If the tank is $\frac{7}{8}$ empty, about how many more miles can the truck travel before the tank is completely empty?

A 35 mi
B 60 mi
C 180 mi
D 420 mi

2. What is the equation of the line below?
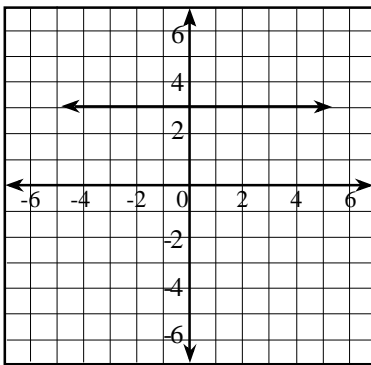
3. What inequality best represents the solution set shown on the number line?
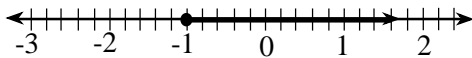
A $x < -1$
B $x \leq -1$
C $x > -1$
D $x \geq -1$

4. Simplify.

$$\frac{6m^3n^2}{2mn}$$

5. Write the following number in scientific notation:

.000000568

6. A paint can has a height of 8 inches and a diameter of 6 inches. Which is the closest to the volume of the paint can?

$$V_{cylinder} = \pi r^2 h$$
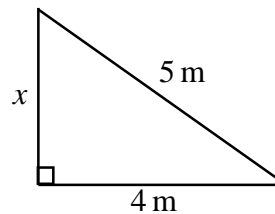
A 82 cu in.
B 86 cu in.
C 151 cu in.
D 226 cu in.

7. Evaluate $4m^2$ if $m = 4$.

8. Mr. Gomez was 125 miles from home at 8:30 A.M. He arrived home at 11:00 A.M. What was his average speed for the time period from 8:30 A.M. to 11:00 A.M.?

$$d = rt$$

A 38 mph
B 42 mph
C 50 mph
D 55 mph

9. Find the missing side of the triangle below.

10. Which statement below is true?

A $\frac{1}{8} > 0.10$

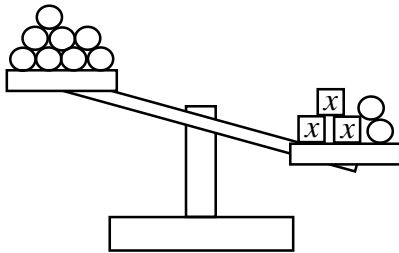B $0.25 = \frac{4}{25}$

C $\frac{1}{2} < 0.50$

D $-6 > 3$

1. Which ordered pair is NOT found using the following linear equation?

$$-4 - 2x = y$$

A (4, -12)
B (1, -6)
C (0, -2)
D (-6, 8)

2. Walgreens sells 8 Snickers bars for every one Milky Way bar sold. On Tuesday, Walgreens sold 32 Snickers bars. How many Milky Way bars were sold Tuesday?

3. Which inequality is represented by the balance below?
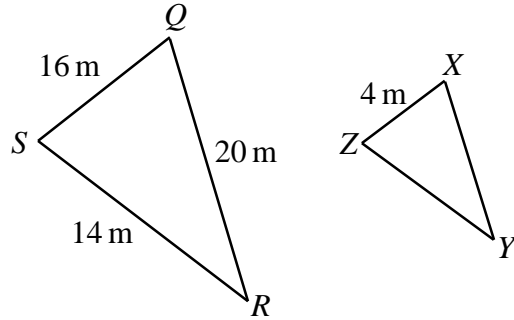
A. $x < 2$
B. $x > 2$
C. $x < 4$
D. $x > 4$

4. Write in scientific notation:

.00000426

5. In solving the equation $2x + 6 = -11$, which inverse operation should be performed first?
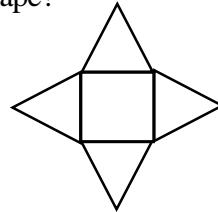
A multiply by 2
B divide by 2
C add 11
D subtract 6

6. $\triangle QRS$ is similar to $\triangle XYZ$.

16 m
20 m
14 m
4 m

What is the length of side $\overline{XY}$?

7. The following net can be folded into what three-dimensional shape?

8. Put the following fractions in order from least to greatest:

$$\frac{1}{2} \quad \frac{3}{8} \quad \frac{4}{10} \quad \frac{1}{3}$$

9. There are 5 students in Tamika's reading group. The scores for the students are shown below.

90, 85, 80, 95, 80

What is the mode of the group's scores?

A 10
B 80
C 85
D 86

10. Find x^4 if $x = 3$.

A 7
B 12
C 27
D 81