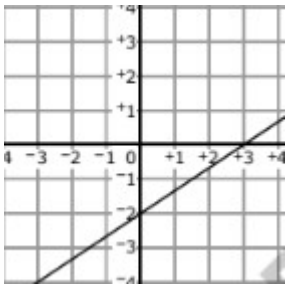
Spiral 1/31 Name: _____

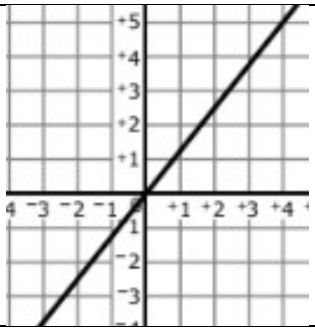
Math 8 Date: _____Period: _____

Directions: Complete the following problems. Show all of your work. You MUST write your answer in the answer blank. Remember to include labels when necessary!

1) What is the equation of the line?



2) What is the equation of the line?



3) Mr. Jones determined that the equation $y = 98 - \frac{16}{5}x$ could be used to predict his students' test scores, based on the number of days, x, a student was absent during the unit. What is the meaning of the y-intercept of the function?

A) A student who was not absent during the unit should score about 98.

B) A student who was not absent during the unit should score about 94.5.

C) A student's test score should increase by about 3.2 points for each day the student is absent.

4) The value in dollars, y, of a car x years after it was purchased can be modeled by the function y = 14,000 – 875x. What is the meaning of the y-intercept?

A) The initial value of the car is $14,000.

B) The average value of the car is $14,000.

C) The car's value decreases by $875 each year after it was purchased.

D) The car's value decreases by $16 each year after it was purchased.

5) Solve for x. 0.25x + 7 = 4(x – 2)

6) Solve. $12(x-2)+3x=\frac{1}{2}(x+6)+2$

7) What is the rate of change of the linear function that has a graph that passes through the points (2, 9) and (–1, 3)?

8) What is the slope of the line that passes through the points (2, 3) and (8, 6)?

9) Solve the system of equations. Remember to write your answer as an ordered pair.

$\begin{cases} y = 2x + 2 \\ y = x - 1 \end{cases}$

10) Solve the system of equations. Write write your answer as an ordered pair.

$\begin{cases} y = 2x + 1 \\ y = -x + 7 \end{cases}$

11) Solve the system of equations. Remember to write your answer as an ordered pair.

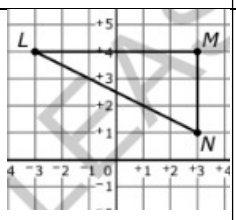
$\begin{cases} y = -x + 3 \\ x - 2y = 0 \end{cases}$

12) △XYZ with vertices X(1, 1), Y(3, 5), and Z(5, 1) will be rotated 180° about the origin. What will be the coordinates of Y'?

A (–5, 3) B (–3, –5)

C (5, –3) D (5, 3)

13) Triangle LMN will be dilated with by a scale factor of ½. What will be the coordinates of L'M'N'?



A L'(–6, –8), M'(6, 8), N'(6, 1)

B L'(–3, 2), M'(3, 2), N'(3, 0.5)

C L'(–1.5, 2), M'(1.5, 2), N'(1.5, 0.5)

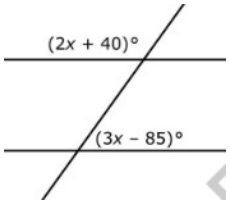
D L'(–1, 2), M'(1, 2), N'(1, 1)

14) A car rental company charges $34 per day for a rented car and $0.50 for every mile driven. A second car rental company charges $20 per day and $0.75 for every mile driven. What is the number of miles at which both companies charge the same amount for a one-day rental?

A 56 miles B 54 miles

C 36 miles D 24 miles

15) Parallel lines P and Q are cut by transversal R. What is the value of x?



Answers

1) _____

2) _____

3) _____

4) _____

5) _____

6) _____

7) _____

8) _____

9) _____

10) _____

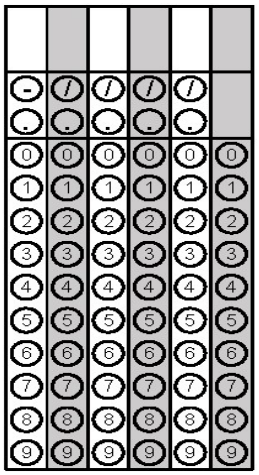
11) _____

12) _____

13) _____

14) _____

15) GRID RESPONSE



Spiral 2/14
Math 8

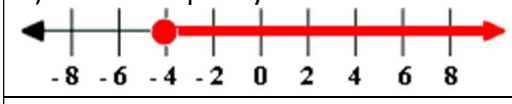
Name: _____
Date: _____Period: _____

<u>Directions</u>: Complete the following problems. Show all of your work. You MUST write your answer in the answer blank. Remember to include labels when necessary!

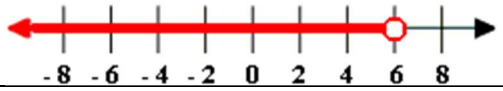
1) Solve: $-5(x + 2) > 15$

2) Solve: $4(3 - x) - 3(4 - x) > -15$

3) What inequality is shown below?



4) What inequality is shown below?



5) When Derek planted a tree it was 36 inches tall. The tree grew 2.75 inches per year. The tree is now 110.25 inches tall. How many years ago did Derek plant the tree?

6) Amanda bought a computer for $56.94 more than twice what her brother paid for a TV. She paid $314.02 for the computer. What did her brother pay for the TV?

7) A hat, H, and a scarf, S, cost $20.00. The hat costs $2.00 more than the scarf. How much does the scarf cost?

8) Simplify by combining like terms:

$$6a + 3b - 2a + 4 - b$$

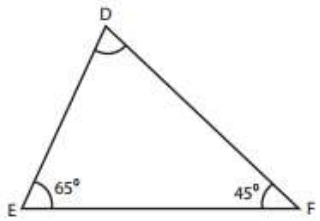
9) Solve:

$$-4x + 3(2x - 5) = 31$$

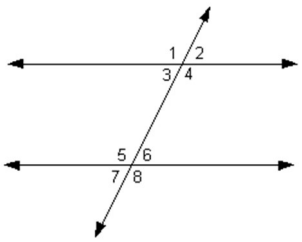
10) True or False: $p = -9$ is a solution to the following equation..

$$6p - 2p = -36$$

11) Find the measure of angle D.



12) If angles 2 measure 52 degrees, what is the measure of angle 8?



13) Mrs. Otten wants to buy a bouquet of yellow roses and baby's breath for $16. The baby's breath costs $3.50 per bunch and the roses cost $2.50 each. Mrs. Otten wants one bunch of baby's breath and some roses for her bouquet. How many roses can she buy?

14) Solve for x.

$$6x = \frac{8x - 12}{4}$$

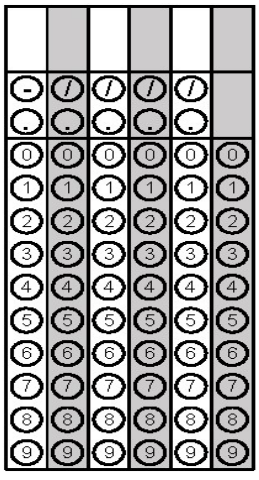
15) Solve:

$$7(t - 4) - 2t = 4(t - 3)$$

<u>Answers</u>

1) _____
2) _____
3) _____
4) _____
5) _____
6) _____
7) _____
8) _____
9) _____
10) _____
11) _____
12) _____
13) _____
14) _____

15) GRID RESPONSE



Spiral 2/21
Math 8

Name: _____
Date: _____Period: _____

<u>Directions</u>: Complete the following problems. Show all of your work. You MUST write your answer in the answer blank. Remember to include labels when necessary!

1) Solve the following system of equations. Write your answer as an ordered pair.

$$5x + 4y = 1$$
$$y = 1 - x$$

2) What is the solution of the system of equations? Write your answer as an ordered pair.

$$y = -2x + 6$$
$$y = \frac{5}{3}x - 5$$

3) In which choice is y a function of x?
A (1, 3), (3, 4), (4, 5), (5, 6)
B (2, 0), (2, 3), (4, 5), (6, 7)
C (2, 5), (4, 8), (6, 10), (2, 12)
D (6, 2), (4, 1), (6, 8), (8, 10)

4) In which set of points is y a function of x?
A {(2, 4), (4, 16), (5, 25), (6, 36)}
B {(4, 2), (4, –2), (16, 4), (16, –4)}
C {(2, 1), (2, 0), (1, –1), (3, 1)}
D {(2, 3), (1, 3), (0, 3), (0, 2)}

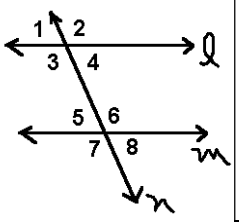
5) In triangle ABC, the measure of angle A is 115 and the measure of angle B is 26. Find the measure of angle C.

6) In triangle ABC, the measure of angle A is 35 and the measure of angle B is 67. Find the measure of angle C.

7) Write an expression for the following phrase:
8 less than the product of 2and x

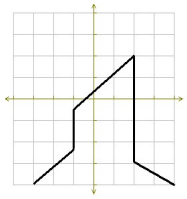
8) Keisha is conditioning for the track team. On the first day, she ran 5 laps around the track. The second day she ran 6 laps. The third day she ran 8, and on the fourth day she ran 11. To continue this pattern, how many laps should she run on the seventh day?

9) If the measure of angle 4 is 67°, what is the measure of angle 6?

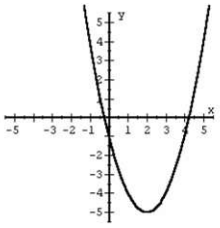


10) Use the diagram for #9 for assistance. If the measure of angle 5 is 3x - 10° and the measure of angle 8 is 2x + 15°, find the value of x.

11) Yes or No: Is the following a function?



12) Yes or No: Is the following a function?



13) The journalism class makes $25 per page of advertising in the yearbook. If the class sold 6 pages of advertising. How much money did the class make?

14) I am thinking of a number. If I multiply it by 7 and add 23, the result is 107. What is the number?

15) The perimeter of a pool table is 30 ft. The table is twice as long as it is wide. What is the length of the pool table?

<u>Answers</u>

1) _____
2) _____
3) _____
4) _____
5) _____
6) _____
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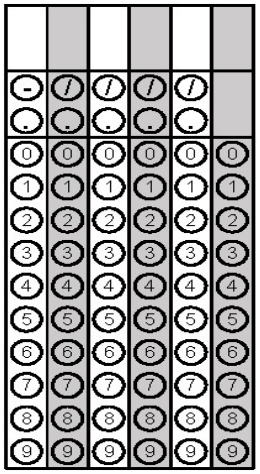
8) _____
9) _____
10) _____
11) _____
12) _____
13) _____
14) _____

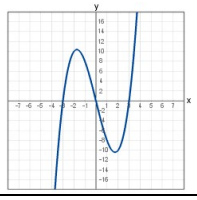
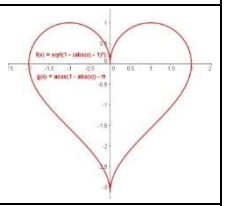
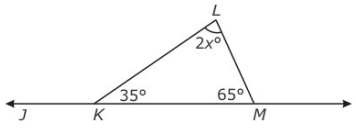
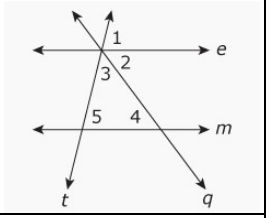
15) GRID RESPONSE



Spiral 2/28
Math 8

Name: _____
Date: _____Period: _____

<u>Directions</u>: Complete the following problems. Show all of your work. You MUST write your answer in the answer blank. Remember to include labels when necessary!

1) Solve: 2(4x + 3) = 38	2) Solve $-4d + 2(3 + d) = -14$
3) Solve for x: $6(x - 7) + 5x - 3(2x + 4) = -(4x - 9)$	4) Belle is planning a party for 70 guests, including herself. She has two rectangular tables, each seating 8 people. The round tables have room for 6 people. How many round tables does Belle need
5) Is the following a function? 	6) Does the following graph show a function? 
7) Find the slope of a line that passes through the points (2, 15) and (5, 8).	8) Find the slope of the line that goes through the given points. (-3, 1) and (5, 4)
9) Find the value of x and the measure of Angle JKL. 	10) The measure of angle 4 is 45° and the measure of angle 5 is 67°. What is the measure of angle 1? 
11) Ben is deciding on a new cell phone plan. Verizon Wireless is going to charge him $120 as an initial fee plus $35 per month for unlimited texting and 500 anytime minutes. Write an equation to model this situation.	12) Write an equation for the line that has a rate of change of ½ and passes though the point (-2, 5).
13) The equation *s* = 20*h* + 10 predicts Mary's score, *s*, on her next math test based on the number of hours, *h*, Mary studies. If the equation works and Mary studies for 2.75 hours, what will be her score?	14) Eric drew two squares side by side (this means touching, they share a side). The perimeter of the resulting rectangle is 90 meters. What is the area of the rectangle?
15) A square is folded in half to form a rectangle. If the resulting rectangle has a perimeter of 15 inches, what is the area of the original square?	

<u>Answers</u>

1) _____

2) _____

3) _____

4) _____

5) _____

6) _____

7) _____

8) _____

9) _____

_____

10) _____

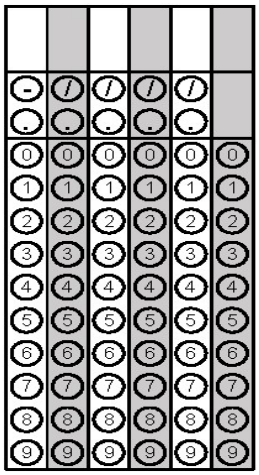
11) _____

12) _____

13) _____

14) _____

15) GRID RESPONSE

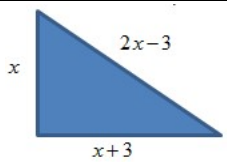


Spiral 3/6
Math 8

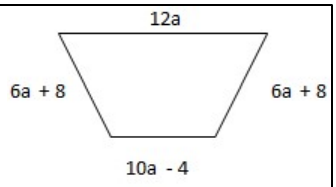
Name: _____
Date: _____Period: _____

<u>Directions</u>: Complete the following problems. Show all of your work. You MUST write your answer in the answer blank. Remember to include labels when necessary!

1) The perimeter is 36. What does x have to be?



2) If the perimeter is 114 cm, how long is the longest side?



3) Jim gets a $20 allowance per week plus $25 for every lawn he mows. If he made $345 in one week, how many lawns did he mow?

4) Jon has to pay a fix-it man $60 to come to his house and $30 per hour after that. How many hours did the fix-it man work if Jon paid him $390?

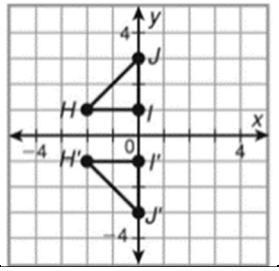
5) Solve: $2x - 53 = 11$

6) Solve: $-2 - \frac{5}{4}x = 13$

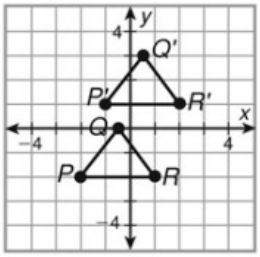
7) Solve: $7 - 3x = 2x + 7 - 5x$

8) Solve: $-19x - 1 = -12x + 34$

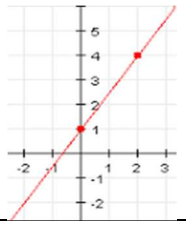
9) Is the following a rotation, reflection or translation?



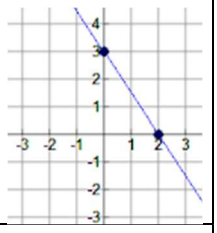
10) Is the following a rotation, reflection or translation?



11) What is the slope?



12) What is the slope?



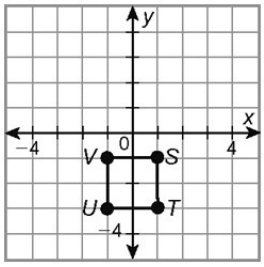
13) What is the slope? (-1,2) and (-2,5)

14) What is the slope? (-2,-2) and (4,3)

15) Reflect the figure across the x-axis. Draw on the final figure on answer side. Don't forget to label your vertices.

<u>Answers</u>

1) _____
2) _____
3) _____
4) _____
5) _____
6) _____
7) _____
8) _____
9) _____
10) _____
11) _____
12) _____
13) _____
14) _____
15)



Spiral 3/13
Math 8

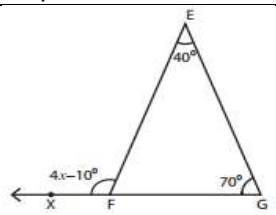
Name: _____
Date: _____Period: _____

<u>Directions</u>: Complete the following problems. Show all of your work. You MUST write your answer in the answer blank. Remember to include labels when necessary!

1) Alexis has a cylindrical can with a diameter of 24cm and a height of 42 cm. What is the volume of the can? Use 3.14 as an approximation for pi.

2) The diameter of a sphere is 6 cm. What is the volume? Use 3.14 as an approximation for pi.

3) What is the value of *x*.

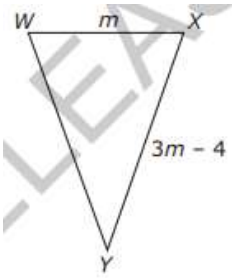


4) In which choice do all the points lie on the same line?

A. (0, -2), (1, -1), (2, 2), (3, 7)
B. (0, 0), (1, 1), (2, 4), (3, 9)
C. (0, 0), (1, 1), (2, 8), (3, 27)
D. (0, 0), (1, 2), (2, 4), (3, 6)

5) When 8 is added to the number that is produced by doubling the number x, the result is equal to 8 times the number that is 5 less than x. What is the value of x?

6) In triangle WXY , WY is congruent to XY. The perimeter of triangle WXY is 76 inches. How many inches long is WX ?



7) A system of equations is shown.

$$2x + 4y = 0 \qquad y = \frac{1}{2}x - 3$$

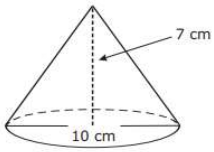
What is the x-value in the solution to the system of equations?

A. – 3
B. – 1.5
C. 1.5
D. 3

8) Alice compared the graphs of two functions. The first function was $y = 3x + 4$. The second function fits the values in the table. What is the difference between the y-intercepts of the two functions?

x	y
2	17
5	32
8	47
11	62

9) What is the volume of the cone? Use 3.14 as an approximation for pi.



10) Evaluate $\frac{4(2b+c)}{2c}$ if b = 5 and c = 5

11) Solve the following equation:

2(3a + 2) = -8

12) Solve the following equation.

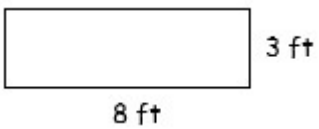
8f – 12 = 5f + 12

13) A nursery charges $4.80 for 40 pounds of topsoil. How much would the nursery charge for 25 pounds of topsoil?

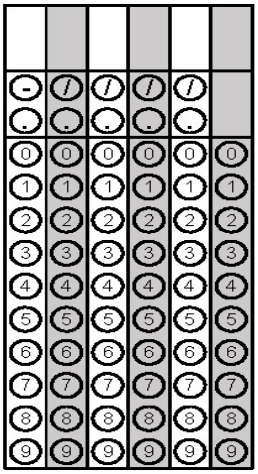
14) Evaluate for m = 2 and n = -1

$(m + 5n)^3$

15) Fran has a rectangular pen for her puppies, shown below. Fran bought more fencing to double the length of the shorter side of the pen. The length of the longer side was unchanged. What is the area of the new pen?



<u>Answers</u>

1) _____
2) _____
3) _____
4) _____
5) _____
6) _____
7) _____
8) _____
9) _____
10) _____
11) _____
12) _____
13) _____
14) _____

15) GRID RESPONSE