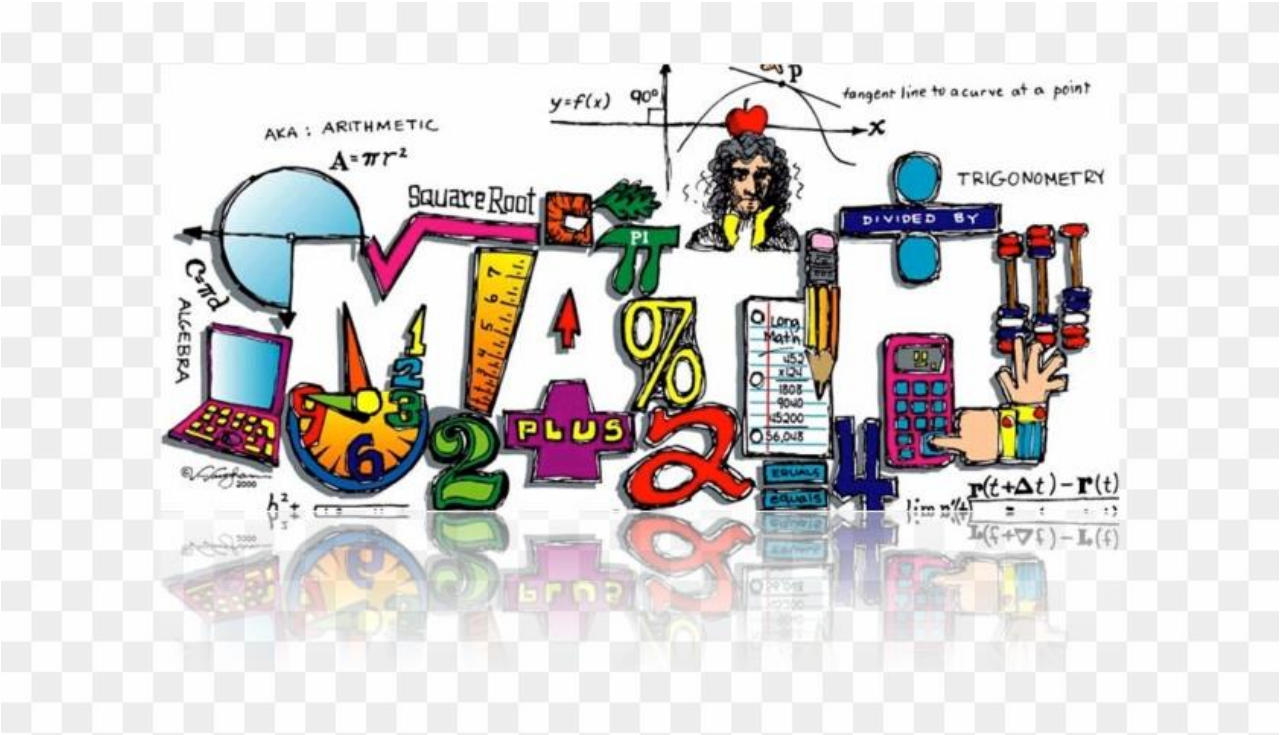


SLPS Continuous Learning
Grade 8 Math
Apr 27 – May 8

Students are encouraged to maintain contact with their home school and classroom teacher(s). If you have not already done so, please visit your child's school website to access individual teacher web pages for specific learning/assignment information. If you cannot reach your teacher and have elected to use these resources, please be mindful that some learning activities may require students to reply online, while others may require students to respond using paper and pencil. In the event online access is not available, please record responses on paper. Completed work should be dropped off at your child's school. Please contact your child's school for the dates and times to drop off your child's work.

If you need additional resources to support virtual learning, please visit: https://www.slps.org/extendedresources

Grade 8 Math Learning Plan		
Date	**Topic/Standard**	**Instructional Video and Activity**
Apr 27, 2020	Graphing Linear Equations I can apply concepts of slope and y-intercept to graphs, equations and proportional relationships.	Watch the following videos https://youtu.be/qk69pR91R00 Students solve questions and answer the puzzle • Grade 8 Math Puzzle 1
Apr 28, 2020	Slope of a line I can apply concepts of slope and y-intercept to graphs, equations and proportional relationships.	Watch the following videos https://youtu.be/WkspBxrzuZo Students solve questions and answer the puzzle • Grade 8 Math Puzzle 2
Apr 29, 2020	Graphing Proportional Relationships I can apply concepts of slope and y-intercept to graphs, equations and proportional relationships.	Watch the following videos https://youtu.be/1F7LAJEVp-U Students solve questions and answer the puzzle • Grade 8 Math Puzzle 3
Apr 30, 2020	Graphing Linear Equations in Slope-intercept Form. I can apply concepts of slope and y-intercept to graphs, equations and proportional relationships.	Watch the following video https://youtu.be/405boztgZig Students solve questions and answer the puzzle • Grade 8 Math Puzzle 4
May 1, 2020	Graphing Linear Equations in Standard Form I can apply concepts of slope and y-intercept to graphs, equations and proportional relationships.	Watch the following video https://youtu.be/405boztgZig https://youtu.be/PfSsLjnnS60 Students solve questions and answer the puzzle • Grade 8 Math Puzzle 5

Grade 8 Math Learning Plan		
Date	**Topic/Standard**	**Instructional Video and Activity**
May 4, 2020	Writing Equations in Slope-Intercept Form I can use functions to model linear relationships between quantities.	Watch the following videos https://youtu.be/9wOalujeZf4 Students solve questions and answer the puzzle • Grade 8 Math Puzzle 1
May 5, 2020	Writing Equations in Point-Slope Form I can use functions to model linear relationships between quantities.	Watch the following videos https://youtu.be/-6Fu2T_RSGM Students solve questions and answer the puzzle • Grade 8 Math Puzzle 2
May 6, 2020	Solving Systems of Linear Equations by Graphing I can analyze and solve systems of linear equations	Watch the following videos https://youtu.be/5a6zpfl50go Students solve questions and answer the puzzle • Grade 8 Math Puzzle 3
May 7, 2020	Solving Systems of Linear Equations by Substitution I can analyze and solve systems of linear equations	Watch the following video https://youtu.be/GWZKz4F9hWM Students solve questions and answer the puzzle • Grade 8 Math Puzzle 4
May 8, 2020	Solving Systems of Linear Equations by Elimination I can analyze and solve systems of linear equations	Watch the following video https://youtu.be/vA-55wZtLeE Students solve questions and answer the puzzle • Grade 8 Math Puzzle 5

Name _____ Date _____

4.1 Puzzle Time

What Arctic Bird Can Be Found In A Bakery?

Write the letter of each answer in the box containing the exercise number.

Find the values of *y* that correspond to the given values of *x* for the linear equation.

1. $y = 4x + 3$ for $x = -1, 0, 1$

2. $y = -\frac{3}{2}x + 5$ for $x = 0, 2, 4$

3. $y = -9$ for $x = 0, 1, 2$

4. $y = -7x + 8$ for $x = -1, 0, 1$

5. $y = \frac{5}{3}x - 6$ for $x = -3, 0, 3$

6. $y = 1.4x - 9$ for $x = 0, 1, 2$

Solve for *y*. Then find the values of *y* that correspond to the given values of *x* for the linear equation.

7. $y + 8x = -2$ for $x = 0, 1, 2$

8. $12x + 3y = 15$ for $x = -1, 0, 1$

9. $\frac{1}{4}y - 3x = 9$ for $x = -2, 0, 2$

10. $0.4y + 2x = 1.2$ for $x = -3, 0, 3$

11. The equation $22 = 2y + x$ represents the perimeter of a flower garden with length y (in feet) and width x (in feet). Solve for y. Then find the length of the flower garden when the width is 2 feet, 3 feet, and 4 feet.

12. The equation $0.60 = 0.05x + 0.10y$ represents the number of nickels x and dimes y needed to add up to 60 cents. Solve for y. Then find the number of dimes that are needed to make 60 cents when the number of nickels is 0, 2, and 4.

Answers

E. $y = -9, -7.6, -6.2$

F. $y = 12, 36, 60$

P. $y = 18, 3, -12$

I. $y = -2, -10, -18$

A. $y = 15, 8, 1$

F. $y = 6, 5, 4$

M. $y = 10, 9.5, 9$

U. $y = -11, -6, -1$

C. $y = 9, 5, 1$

N. $y = 5, 2, -1$

R. $y = -9, -9, -9$

A. $y = -1, 3, 7$

1		8	3	6	4	11		10	5	9	12	7	2

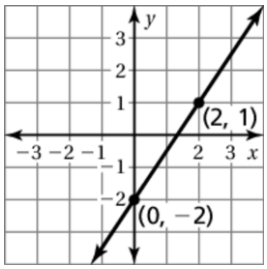
Name _____ Date _____

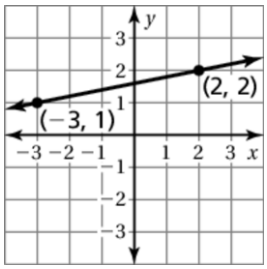
4.2 Puzzle Time

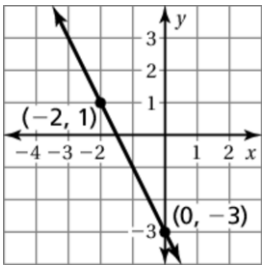
What Did One Poppy Seed Say To The Other?

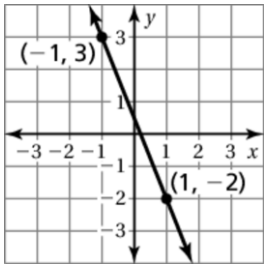
Circle the letter of each correct answer in the boxes below. The circled letters will spell out the answer to the riddle.

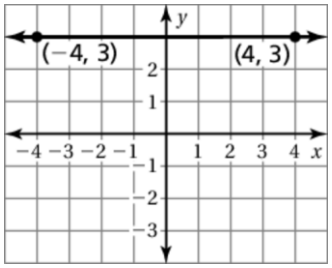
Find the slope of the line through the given points.

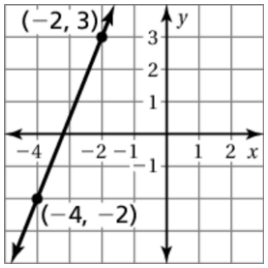
1. 

2. 

3. 

4. 

5. 

6. 

7. $(1, 4), (3, -2)$

8. $(1, 2), (1, -2)$

9.

x	−5	−3	3	5
y	15	7	−17	−25

I	T	M	S	A	O	N	H	A	P	L	R	O	M	E	L	S	L
−2	$\frac{2}{5}$	0	$\frac{1}{6}$	$\frac{4}{3}$	$\frac{1}{5}$	−3	$\frac{1}{4}$	$\frac{3}{2}$	$\frac{1}{50}$	1	−4	$\frac{5}{2}$	$-\frac{1}{3}$	2	$-\frac{5}{2}$	5	und.

Name _____ Date _____

4.3 Puzzle Time

What Do Ants Use For Hula Hoops?

Write the letter of each answer in the box containing the exercise number.

The cost *y* (in dollars) to spend an evening bowling is proportional to the number of games *x* that are bowled. It costs $16 to bowl 4 games.

1. Write an equation that represents the situation.

2. How much does it cost (in dollars) to bowl 6 games?

The gasoline *y* (in fluid ounces) is proportional to the number of fluid ounces of oil *x* used to run a 2-cycle motor. It takes 75 fluid ounces of gasoline for 3 fluid ounces of oil.

3. Write an equation that represents the situation.

4. How much gasoline (in fluid ounces) is needed for 8 fluid ounces of oil?

The number of pancakes *y* is proportional to the cups of pancake mix *x* that is used to make the pancake batter. The pancake batter will make 10 pancakes when 2 cups of pancake mix is used.

5. Write an equation that represents the situation.

6. How many pancakes are made when 5 cups of pancake mix are used in the pancake batter?

The toll charge *y* (in dollars) is proportional to the number of miles *x* traveled on the interstate. It cost $9 to travel 60 miles.

7. Write an equation that represents the situation.

8. How much does the toll charge cost (in dollars) when you travel 100 miles?

Answers

H. $y = 5x$

S. $y = 25x$

I. $y = 4x$

E. $y = 0.15x$

O. 25

C. 15

R. 200

E. 24

8	5	2	7	4	1	6	3

Name _____ Date _____

4.4 Puzzle Time

Did You Hear About...

A	**B**	**C**	**D**	**E**	**F**
G	**H**	**I**	**J**	**K**	**L**
M	**N**	**O**	**P**		

Complete each exercise. Find the answer in the answer column. Write the word under the answer in the box containing the exercise letter.

Find the slope of the graph of the linear equation.

A. $3y = 2x + 3$

B. $y = -x - 2$

C. $4y = -2x + 12$

D. $5y - 10 = x$

Find the *y*-intercept of the graph of the linear equation.

E. $y = 4x - 4$

F. $2y = x - 4$

G. $y - 12 = -9x$

H. $7 + y = 4.3x$

Find the *x*-intercept of the graph of the linear equation.

I. $y = 6x - 9$

J. $3y = 2x + 36$

K. $2y = -5x + 7$

L. $3y - 9 = 4x$

M. $y = 1.6x + 8$

N. $y + 15 = 12.5x$

O. Shannon's hair is 12 inches long and grows 0.25 inch per month. In an equation that represents the length y of her hair after x months, what number represents the slope?

P. You have a \$20 gift card to a coffee shop. Each time you go there, you get chai tea for \$1.25. The equation $y = -1.25x + 20$ represents how much you have left on the gift card after x visits. How many chai teas can you purchase before the balance on your card runs out?

$\frac{3}{2}$ MANY					−4 STOPPED
$-\frac{1}{2}$ WHO					5 HAD
−12 THAT					$-\frac{9}{4}$ POLICE
−7 SO					−1 LADY
0.25 SEASON					22 CAR
−5 GAVE					$\frac{7}{5}$ THE
−2 FOR					−18 TIMES
16 TICKETS					$\frac{1}{5}$ GOT
$\frac{2}{3}$ THE					1.2 HER
−8 DRIVING					12 SPEEDING

Name _____ Date _____

4.5 Puzzle Time

How Do Kangaroos Travel Across The Ocean?

Write the letter of each answer in the box containing the exercise number.

Write the linear equation in slope-intercept form.

1. $3x + y = 8$

2. $9x - y = \frac{1}{3}$

3. $-\frac{1}{4}x + y = 3$

4. $2x - 7y = 12$

Find the *x*- and *y*-intercepts of the linear equation.

5. $-3x + 5y = 15$

6. $2x - y = 4$

7. $4x - 9y = 36$

8. $x + \frac{1}{3}y = -3$

9. $\frac{2}{5}x - \frac{3}{4}y = 12$

10. $7.6x + 15.2y = 38$

11. The booster club sells popcorn at basketball games for \$0.75 per bag. Their cost for supplies is \$12. The equation $-0.75x + y = -12$ represents the booster club's income y after selling x bags of popcorn. Find the x- and y-intercepts of the linear equation.

12. You upload digital photos to an online photo processing website. You can print 4-inch-by-6-inch photos for \$0.30 each and 5-inch-by-7-inch photos for \$0.75 each. The linear equation $0.30x + 0.75y = 15$ represents the ways you can print x 4-inch-by-6-inch photos and y 5-inch-by-7-inch photos for \$15. Find the x- and y-intercepts of the linear equation.

Answers

H. $y = \frac{2}{7}x - \frac{12}{7}$

S. x-intercept: 5;
y-intercept: 2.5

H. x-intercept: -3;
y-intercept: -9

J. x-intercept: 50;
y-intercept: 20

M. x-intercept: 2;
y-intercept: -4

Y. x-intercept: 30;
y-intercept: -16

U. x-intercept: 9;
y-intercept: -4

P. x-intercept: 16;
y-intercept: -12

T. $y = -3x + 8$

E. x-intercept: -5;
y-intercept: 3

P. $y = 9x - \frac{1}{3}$

I. $y = \frac{1}{4}x + 3$

1	4	5	9		12	7	6	2		10	8	3	11

Name _____ Date _____

4.6 Puzzle Time

What Should You Know If You Want To Become A Lion Tamer?

Write the letter of each answer in the box containing the exercise number.

Write an equation of the line that passes through the points.

1. $(0, 3), (1, 4)$

2. $(0, 0), (5, -2)$

3. $(-2, 0), (0, 4)$

4. $(-3, 2), (0, -3)$

5. $(-7, 4), (0, 4)$

6. $(0, -8), (4, 8)$

7. $(0, -2), (-5, -2)$

8. $(-12, -9), (0, -3)$

9. $(0, 10), (5, 0)$

10. $(-14, 12), (0, 6)$

11. $(0, -6), (6, -24)$

12. $(0, -15), (5, 0)$

13. You are planning to make a scrapbook. The album costs \$20 and each of the scrapbook papers costs an additional \$1. Write an equation that represents the cost of the completed scrapbook where x represents the number of scrapbook papers you purchase.

14. A hot tub that holds 300 gallons of water drains at a rate of 8 gallons per minute. Write an equation that represents how many gallons of water are left in the tub after it has drained for x minutes.

15. An elevator in a tall building is at a point 180 feet above the ground. The elevator descends at a rate of 12 feet per second. Write an equation that represents how far above the ground the elevator is after descending for x seconds.

Answers

T. $y = -2x + 10$

N. $y = \frac{1}{2}x - 3$

H. $y = x + 3$

R. $y = -12x + 180$

E. $y = 2x + 4$

A. $y = -\frac{2}{5}x$

H. $y = -\frac{3}{7}x + 6$

N. $y = x + 20$

E. $y = 4$

T. $y = 4x - 8$

I. $y = 3x - 15$

L. $y = -3x - 6$

M. $y = -8x + 300$

O. $y = -2$

$y = -\frac{5}{3}x - 3$

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

Name _____ Date _____

4.7 Puzzle Time

What Do You Call A Ghost Cheerleader?

Write the letter of each answer in the box containing the exercise number.

Write in point-slope form an equation of the line that passes through the given point and has the given slope.

1. $(1, 5)$; $m = 2$

2. $(-2, 4)$; $m = -3$

3. $(4, 2)$; $m = 3$

4. $(-1, 5)$; $m = -2$

5. $(2, -4)$; $m = -3$

6. $(-5, 1)$; $m = 2$

Write in slope-intercept form an equation of the line that passes through the given points.

7. $(-5\ -5)$, $(5, -7)$

8. $(-3, -4)$, $(3, 0)$

9. $(-2, -7)$, $(2, -1)$

10. $(-6, -4)$, $(6, 4)$

11. You go to an arcade and purchase a card with game credits. After playing 5 games, you have 33 credits left. You play 4 more games and have 21 credits left. Write an equation that represents the number of credits y on the card after x games.

12. You go to a school dance. There is an entrance fee, and there are slices of pizza for sale. After having 1 slice of pizza, you have spent a total of \$6. After having 2 more slices of pizza, you have spent a total of \$10. Write an equation that represents the total cost y after buying x slices of pizza at the dance.

13. You make 2 headbands and have 6 feet of ribbon left. You make 1 more headband and have 4 feet of ribbon left. Write an equation that represents the amount of ribbon y you have left after making x headbands.

Answers

R. $y - 4 = -3(x + 2)$

M. $y = \frac{2}{3}x$

E. $y = 2x + 4$

I. $y + 4 = -3(x - 2)$

P. $y = -2x + 10$

I. $y = -3x + 48$

A. $y - 2 = 3(x - 4)$

T. $y = \frac{2}{3}x - 2$

E. $y - 5 = 2(x - 1)$

T. $y - 1 = 2(x + 5)$

S. $y = \frac{3}{2}x - 4$

T. $y - 5 = -2(x + 1)$

H. $y = -\frac{1}{5}x - 6$

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

Name _____ Date _____

5.1 Puzzle Time

Why Did The Student Eat His Homework?

A	B	C	D	E	F
G	H	I	J		

Complete each exercise. Find the answer in the answer column. Write the word under the answer in the box containing the exercise letter.

Solve the system of linear equations by graphing.

A. $y = x$
$y = -x$

B. $y = x + 1$
$y = -x - 3$

C. $y = 2x$
$y = 4x + 2$

D. $y = -4x + 2$
$y = 2x + 2$

E. $y = -\frac{1}{4}x + \frac{3}{4}$
$y = \frac{1}{4}x - \frac{3}{4}$

F. $y = \frac{1}{2}x - 1$
$y = -x + 2$

G. $x + y = 3$
$y = x - 1$

H. $4x + y = 12$
$y = 4x + 4$

I. $-x + y = -3$
$4x + y = 2$

J. At a grocery store, Candy buys 2 cantaloupes at x dollars each and 1 watermelon at y dollars. Her total bill is \$9. Chip goes to the same grocery store and buys 1 cantaloupe at x dollars and 1 watermelon at y dollars. His total bill is \$6. Write and solve a system of linear equations by graphing to find the cost x of a cantaloupe and the cost y of a watermelon.

(–4, 4) STUDENT	(–1, –2) TOLD
(0, 0) THE	(1, –2) OF
(1, 8) PIECE	(5, 0) HERSELF
(–2, 1) DOG	(2, 0) WAS
(3, 0) IT	(8, 1) ATE
(5, –3) HER	(2, 1) A
(3, 3) CAKE	(0, –6) HOMEWORK
(–3, 5) ICING	(–2, –1) TEACHER
(0, 2) HIM	(7, 7) SAID

Name _____ Date _____

5.2 Puzzle Time

Where Do High Jumpers Store Their Valuables?

Write the letter of each answer in the box containing the exercise number.

Solve the system of linear equations by substitution.

1. $y = x$
$y = 2x - 1$

2. $y = -x$
$y = 3x - 4$

3. $y = 5x - 6$
$y = 4x - 2$

4. $x + y = 7$
$7x + y = 1$

5. $-8x + y = 9$
$5x - y = 3$

6. $x - y = 0$
$9x + y = 0$

7. $x + y = 5$
$3x - y = 7$

8. $3x - 2y = 12$
$4x + 2y = 16$

9. $\frac{1}{2}x + y = 2$
$-x + y = 2$

10. $\frac{1}{2}x + \frac{1}{4}y = 2$
$x + y = 1$

11. $6x - y = 24$
$6x + y = -12$

12. There are a total of 52 students on the soccer team and the field hockey team. The field hockey team has 12 more students than the soccer team. Write a system of linear equations that fits this situation. How many students are on the soccer team x and the field hockey team y?

Answers

P. $(20, 32)$

V. $(0, 0)$

L. $(7, -6)$

I. $(-1, 8)$

T. $(4, 0)$

U. $(4, 14)$

A. $(1, -18)$

N. $(1, -1)$

E. $(-4, -23)$

O. $(0, 2)$

A. $(3, 2)$

L. $(1, 1)$

4	2		11		12	9	1	5		6	7	3	10	8

Name _____ Date _____

5.3 Puzzle Time

Does It Take Longer To Run From First Base To Second Base Or From Second Base To Third Base?

A	B	C	D	E	F
G	H	I	J		

Complete each exercise. Find the answer in the answer column. Write the word under the answer in the box containing the exercise letter.

Solve the system of linear equations by elimination.

A. $x + y = 6$
$x - y = 2$

B. $x + 5y = 15$
$-x - 2y = 0$

C. $3x + 4y = 5$
$3x - 4y = -11$

D. $-x - 2y = 9$
$x + 4y = 9$

E. $x - 6y = -11$
$8x + 6y = 20$

F. $3x + 2y = 24$
$-x + 2y = 16$

G. $4x + 9y = -12$
$4x - 7y = 20$

H. $3x + 7y = 9$
$4x - 7y = 12$

I. $2x + 5y = 4$
$4x + 7y = 11$

J. The local theater is showing a matinee and offering a special deal for the community. A ticket for an adult costs \$11 and a ticket for a child costs \$6. The theater sells a total of 60 tickets and collects \$460. How many adult tickets x and children tickets y are sold?

$(2, 9)$ **BECAUSE**	$(-1, 2)$ **TO**
$\left(\frac{9}{2}, -1\right)$ **A**	$(0, 0)$ **BAT**
$(-2, 1)$ **REFEREE**	$(6, 0)$ **HOMERUN**
$(4, 2)$ **SECOND**	$(1, 2)$ **BASE**
$(5, 5)$ **CATCHER**	$(20, 40)$ **SHORTSTOP**
$(-27, 9)$ **THIRD**	$(2, 4)$ **MITT**
$(0, 3)$ **FIRST**	$\left(\frac{3}{2}, -2\right)$ **THERE**
$(-9, 8)$ **BALL**	$(5, -6)$ **FOUL**
$(3, 0)$ **IS**	$(-10, 5)$ **BASE**