Rising 8th Graders Summer Math Packet

Dear Parents,

Rockdale County Public Schools is committed to providing the best math education possible for your child. Due to the cumulative nature of mathematics, in order for your child to be successful in the coming school year, he/she must possess mastery of many concepts from his/her previous math classes. For this reason, we have created a summer math packet to ensure your child is up to date on his/her prerequisite math skills.

1. Complete the practice problems embedded in the summer packet for the students who will be enrolled in 8th grade during the Fall of 2020. The use of the Braining Camp manipulatives can be found in ClassLink on their laptop.



2. The use of www.khanacademy.org can be helpful for students to use. Type in the learning target topic(s) in the search menu. Here, your son/daughter will find tutorials and extra practice problems. Have him/her watch the tutorials and do the extra practice problems. This website will let your child know if he/she is doing the work correctly.

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Prerequisite Skill: Integer Operations (MGSE7.NS.1)

Learning Targets:

✓ I can add integers with a number line.

✓ I can add integers with two-color counters.

Instructional Videos: Watch the videos below for additional help with the prerequisite skills (press Ctrl and click to follow the link).

Adding Integers using a Number Line Adding Integers with Counters

Practice Problems: Show your work below or on a separate sheet of paper.

Problem	Model	Answer
0 + -4	(-1) (-1) (-1)	0 + -4 = -4
	-5 -4 -3 -2 -1 0	
4 + -10		
-5 + -2		
-7 + 2		
-9 + -3		
2 + -5		
-4 + -1		-4 + -1 = -5
13 + -7		
-6 + -3		
-8 + 5		
2 + -4		
1 + -4		

Prerequisite Skill: Integer Operations (MGSE7.NS.1)	Learning Targets:	
	✓ I can subtract integers by adding the additive inverse.	

Instructional Videos: Watch the videos below for additional help with the prerequisite skills (press Ctrl and click to follow the link).

<u>Subtract Integers by Adding the Additive Inverse</u> <u>Subtracting Positive and Negative Numbers</u>

Practice Problems: Show your work below or on a separate sheet of paper.

1.
$$5-2=5+-2=3$$

2.
$$15 - 6 =$$

4.
$$21 - 7 =$$

5.
$$-3-5=$$

6.
$$8-2=$$

7.
$$-6-6=$$

9.
$$27 - 9 =$$

10.
$$3 - 6 =$$

11.
$$43 - 43 =$$

Prerequisite Skill: Multi-Step Equations (MGSE7.EE.3)

Learning Targets:

- ✓ I can solve two-step equations.
- ✓ I can solve multi-step equations using the distributive property.

Instructional Videos: Watch the videos below for additional help with the prerequisite skills (press Ctrl and click to follow the link).

Intro to Two-Step Equations

Solving Two-Step Equations: The Basics

Solving Multi-Step Equations: Using the Distributive Property

Practice Problems: Show your work on a separate sheet of paper.

- 1. 12c + 6 = 78
- 2. 4(m-7) = 12
- 3. 3p 5 = 16
- 4. 2b 3 = -9
- 5. 3(x-7) = 27
- 6. 9x 7 = -7
- 7. 2(n+5) = -2
- 8. -80 = -9x + 1
- 9. 144 = -12(x + 5)
- 10. -15 = -4m + 5

Prerequisite Skill: Multi-Step Equations (MGSE7.EE.3)

Learning Targets:

- ✓ I can solve multi-step equations by combining like terms.
- ✓ I can solve multi-step equations using the distributive property.
- ✓ I can solve multi-step equations with variables on both sides.

Instructional Videos: Watch the videos below for additional help with the prerequisite skills (press Ctrl and click to follow the link).

Solve Equations with Variables on Both Sides

How to Solve Multi-Step Equations

Solve Multi-Step Equations with Variables on Both Sides

Practice Problems: Show your work on a separate sheet of paper.

1.
$$3x - 2(4x - 4) = 3$$

$$2. \quad 9x - 3x - 20 = 10$$

3.
$$x/3 + 10 = 15$$

4.
$$3/5(4x + 1) = -9$$

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

6.
$$-(7-4s) = 9 + s$$

7.
$$8x - 2 = -9 + 7x$$

8.
$$5n + 34 = -2(1 - 7n)$$

9.
$$6 = 1 - 2n + 5$$

10.
$$-(1+7x)-6(-7-x)=36$$

Prerequisite Skill: Coordinate Plane (MGSE6.NS.6)

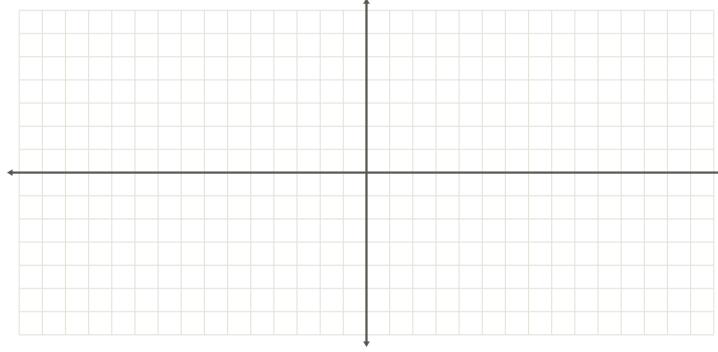
Learning Targets:

- ✓ I can plot points on a coordinate plane.
- ✓ I can determine what quadrant an ordered pair is located in.

Instructional Videos: Watch the videos below for additional help with the prerequisite skills (press Ctrl and click to follow the link).

Plotting Points on all Four Quadrants

Practice Problems: Plot the following points below and tell what quadrant the point is located.



- 1. A(4, -2)
- 2. B(0, 0)
- 3. C(-5, -5)
- 4. D(0, 6)
- 5. E(-7, 0)
- 6. F(3, 7)
- 7. G(1, 1)
- 8. H(-3, 4)
- 9. I(11, -3)
- 10. J(-12, -4)
- 11. K(3, -1)
- 12. L(2, 0)
- 13. M(-1, 7)
- 14. N(-4, -4)

Prerequisite Skill: Coordinate Plane

Learning Targets:

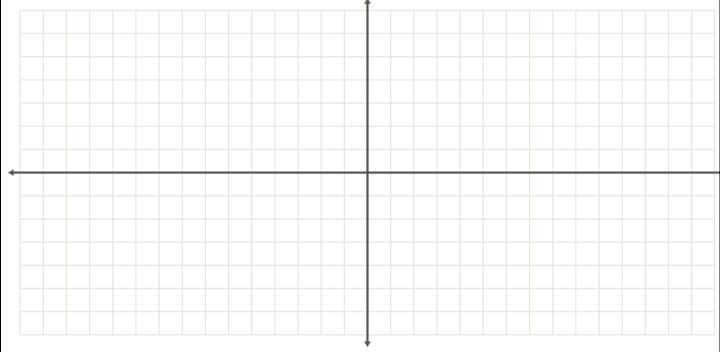
✓ I can reflect a point over the X axis.

✓ I can reflect a point over the Y axis.

Instructional Videos: Watch the videos below for additional help with the prerequisite skills (press Ctrl and click to follow the link).

Reflect Points over the X and Y Axes
Reflections over the X and Y Axes Explained

Practice Problems: Plot the following points below, then reflect each point over the x-axis and y-axis. Use different colored pencils to show the movement.



- 1. O(1,3)
- 2. P(-2, 2)
- 3. Q(-4, 5)
- 4. R(2, -5)
- 5. S(0, 0)
- 6. T(1, 3)
- 7. U(-7, -7)
- 8. V(8,3)
- 9. W(-6, 6)
- 10. X(1, -5)
- 11. Y(-1, -6)
- 12. Z(3, -3)