NAME _____

NTI DAY #7 PERIOD ____

(weather-closed school day)

PACKET SEVEN

(Math)

General Directions:
Due to weather, Harrison County Schools are closed. In an effort to utilize this day on the school calendar, your child is assigned and should work on this "packet" of school work today. It will count as a grade for this subject. The work attached is specific to the subject listed above. Please contact your child's teacher of this subject at 234-7123 in the event you/your student have questions on this packet. Staff and teachers reported to HCMS today and are available should you have questions.

remind Please join!

Sign up for important updates from Ms. Herrington.

Get information for **8th Grade Math Gold** (and alg) right on your phone—not on handouts.

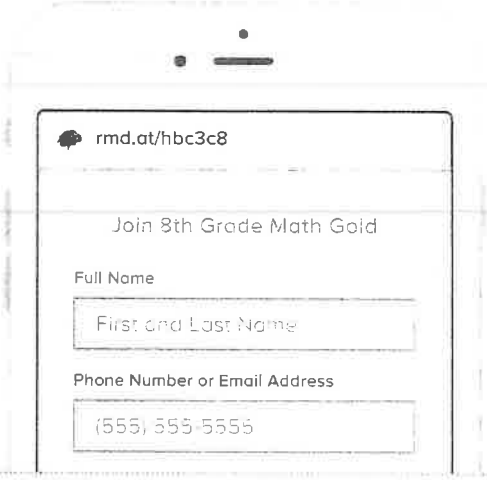
Pick a way to receive messages for **8th Grade Math Gold**:

A **If you have a smartphone, get push notifications.**

On your iPhone or Android phone, open your web browser and go to the following link:

rmd.at/hbc3c8

Follow the instructions to sign up for Remind. You'll be prompted to download the mobile app.



B **If you don't have a smartphone, get text notifications.**

Text the message @hbc3c8 to the number 81010.

If you're having trouble with 81010, try texting @hbc3c8 to (859) 559-4879.

**Standard text message rates apply*

Don't have a mobile phone? Go to rmd.at/hbc3c8 on a desktop computer to sign up for email notifications.

Solving Multi-Step Equations

MORE NOTES

To solve an equation with variables on both sides:

1. **Perform any distributive property shown in the equation.**
2. **Combine any like terms in the equation (do not cross the =)**
3. **Try to get all the variable terms on one side of the equation**
   a. **It doesn't matter which side you choose**
   b. **Make sure you follow the rules for equations**
4. **Now get all the constants (regular numbers) on the OTHER side of the equation.**
   a. **You must have your variable term on one side, and your constant term on the other**
   b. **Make sure you follow the rules for equations**
5. **Divide to get the variable all by itself**

EXAMPLES

1) **$3x + 20 = x - 8$** **$7x - 8 = 9x + 7$**

$3x + 20 = x - 8$

Subtract x on both sides $-x \quad -x$

$2x + 20 = -8$

Subtract 20 on both sides $-20 \quad -20$

$\frac{2x}{2} = \frac{-28}{2}$

Divide by 2 on both sides

$x = -14$

$7x - 8 = 9x + 7$

same answer!

$-14 = x$

******Alternate way...**

$3x + 20 = x - 8$

Subtract 3x on both sides $-3x \quad -3x$

$20 = -2x - 8$

Add 8 on both sides $+8 \quad +8$

$\frac{28}{-2} = \frac{-2x}{-2}$

Date _____

Notes
Solutions to Linear Equations in One Variable

The Solution of an equation is the value(s) of the variable(s) that make the equation a **true statement**.

- Equations in **one variable** can have one solution, infinite solutions or no solution.

	One Solution	Infinite Solutions	No Solution
Reasoning: *What the type of solution means.*	Only one value will make the equation **true**. ★ one number	any value will make the equation **true**. ★ any number	no values will make the equation **true**. ★ no number
True Solution? *Always, Sometimes, Never*	Sometimes A *conditional equation* is true for **some** values of x. only true one time	Always An *identity* is **always** true, for any value of x. True every time	Never A *contradiction* is **never** true for any value of x. Not ever true
Example:	$4x + 6 = 18$ $-6 \quad -6$ $\frac{4x}{4} = \frac{12}{4}$ ÷ $x = 3$ ★ 3 is the only number that makes the equation **true**.	$5x + 15 = 5x + 15$ $-5x \quad -5x$ $15 = 15$ ★ Any number for x will make the equation **true**.	$4x + 8 = 4x + 3$ $-4x \quad -4x$ $8 = 3$ ★ No number for x will make the equation true.
Hints: *Look at both sides of the equation.*	End result still has a variable and a Solution.	Variables cancel each other out and **both sides** of the equation look equal.	Variables cancel each other out and **both sides** of the equation do not look equal.

Name_____

Beach Equations Show work on separate paper (included at the end of packet)

Directions: Solve the following equations. Find the answer on the coloring page and color the sections the color given in the problem. .

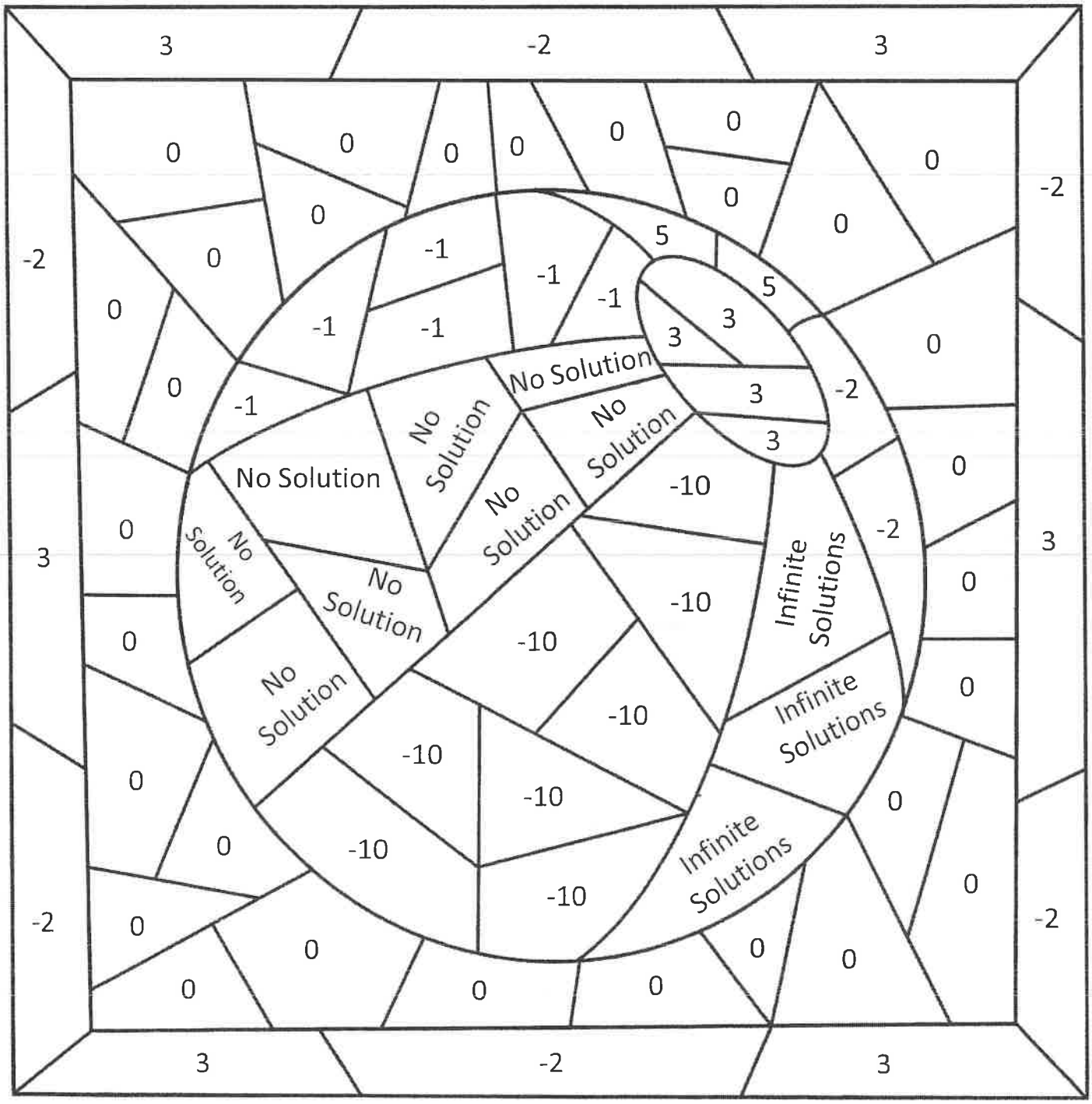
Required Colors: pink, orange, yellow, green, light blue, blue, purple.

1	$x - 3 = 2x + 7$	RED
2	$2(x + 1) = 11 - x$	YELLOW
3	$5x - 1 = 3x - 5$	ORANGE
4	$3x + x = -2x - 6$	GREEN
5	$-x = -4x + 15$	PINK
6	$5x + 3 = 5x - 6$	BLUE
7	$4x + 8 = -2x + 8$	LIGHT BLUE
8	$3x - 6 = 3(x - 2)$	PURPLE

Name_____

Beach Equations

Coloring Page



Name_____

Summer Transformations

DIRECTIONS: Draw the following transformations on the coordinate grid provided.

Figure **A**	Draw a triangle with vertices (0, 3) (-1, 8) and (1, 8)
Figure **A'**	Reflect Figure **A** across the x – axis.
Figure **A''**	Rotate Figure **A** 90° clockwise around the origin.
Figure **A'''**	Translate Figure **A''** to the left 6 units then reflect across the line x = -3.
Figure **B**	Draw a triangle with vertices (-2, -2) (6, -5) and (5, -6)
Figure **B'**	Reflect Figure **B** across the y – axis.
Figure **B''**	Rotate Figure **B** 180° clockwise around the origin.
Figure **B'''**	Translate Figure **B''** up 4 units then reflect across the line y = 2.

Rotation rules (clockwise)

90° - (y, -x)

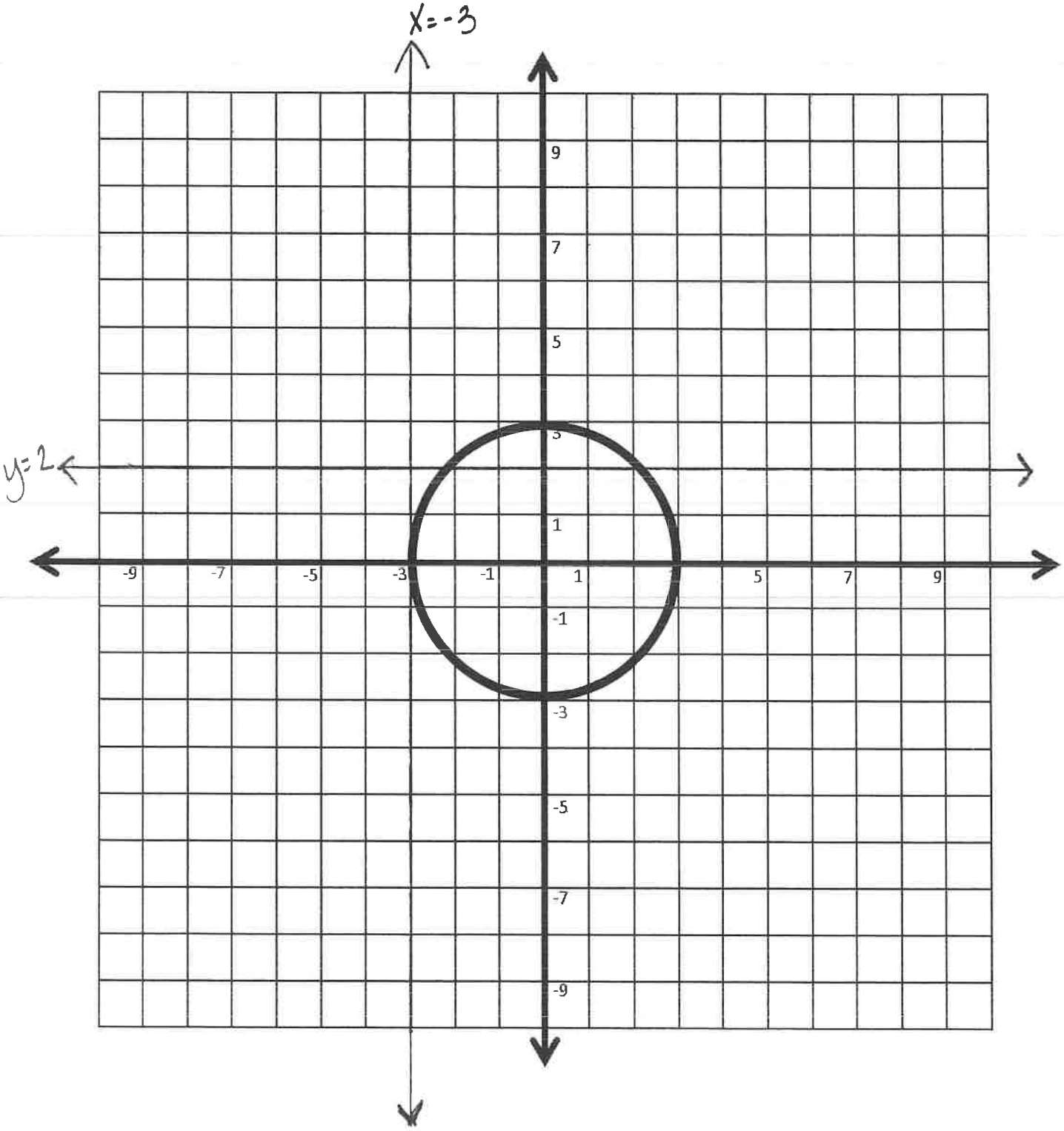
180° - (-x, -y)

270° - (-y, x)

Name_____

Summer Transformations

Coordinate Grid



HW:

Name: _____ #____
Date: _____ Period: _____

NOTES: Lesson 4-10: Writing Equations (Given a Table)

REMEMBER: $y = mx + b$

"m" stands for the _____ of the line.

"b" stands for the _____ of the line.

Ex

x	y
-1	6
0	5
1	4
2	3

(1 ↓, 1 →)

SLOPE = 1

Y-int. = -5

Equation = $1x - 5$ or $x - 5$

If you are given a table of values, and you have verified that the table represents a linear relationship (there is a constant rate of change), you can find both the slope and y-intercept from that table and write the equation of that line.

- To find the **slope** (rate of change), use the formula $m = \frac{\Delta y}{\Delta x}$
- To find the **y-intercept** (initial value), find the coordinate point (x,y) in which the x-coordinate is 0. (0, __)

1)

x	y
-2	-4
0	2
2	8
4	14
6	20

slope: _____

y-intercept: _____ (when $x = 0$)

equation: _____

2)

x	y
-2	80
-1	70
0	60
1	50
2	40

slope: _____

y-intercept: _____ (when $x = 0$)

equation: _____

3)

x	y
-2	1
-1	0.5
0	0
1	-0.5
2	-1

slope: _____

y-intercept: _____ (when $x = 0$)

equation: _____

4)

x	y
1	5
2	10
3	15
4	20
5	25

slope: _____

y-intercept: _____

equation: _____

5)

x	y
-3	9
-1	7
1	5
3	3
5	1

slope: _____

y-intercept: _____

equation: _____

6)

x	y
3	2
6	7
9	12
12	17
15	22

slope: _____

y-intercept: _____

equation: _____

7)

x	y
-3	-2.5
-1	-1.5
1	-0.5
3	0.5
5	1.5

slope: _____

y-intercept: _____

equation: _____