

SUMMER ASSIGNMENT
INCOMING 8TH GRADE

Honors



Summer Math

Welcome to summer vacation!

We don't want you to lose your math skills over the summer, so attached are sheets to be completed for September. Please show your work on a separate piece of loose leaf, and attach that loose leaf to the worksheet. Please write your final answer on the worksheet.

It is recommended that you spread this work out over the summer, so that you don't get rusty nor are you cramming it all in at the end of August.

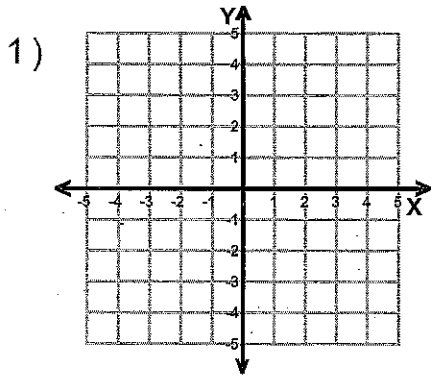
Enjoy the summer, and keep up your skills.

Miss Duggan

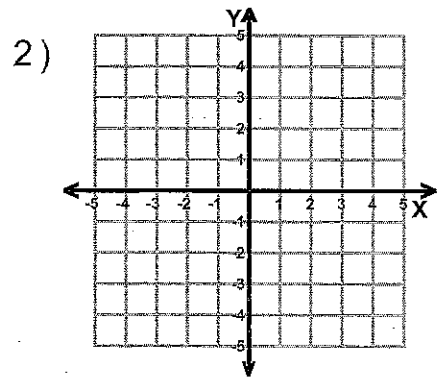
Name : _____ Score : _____

Teacher : _____ Date : _____

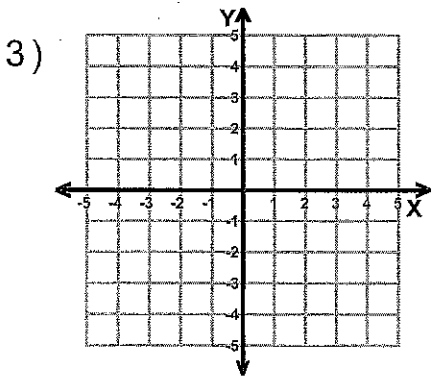
Label answer Solve each system by graphing. Use a RULER



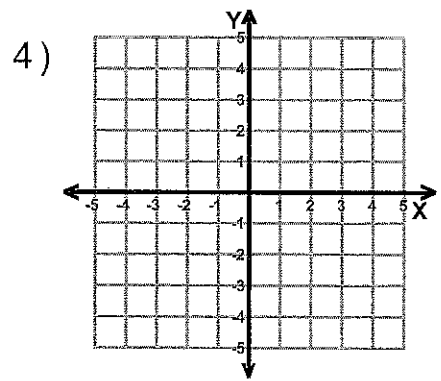
$$y = -\frac{3}{2}x + 1$$
$$y = \frac{1}{2}x - 3$$



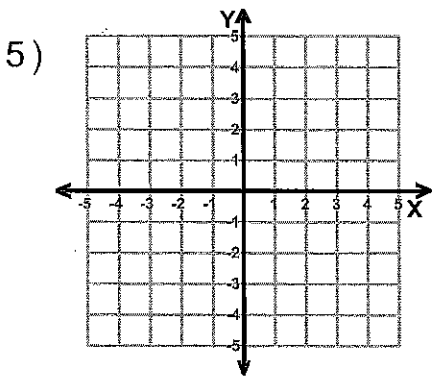
$$y = -2x + 2$$
$$y = \frac{1}{3}x - 5$$



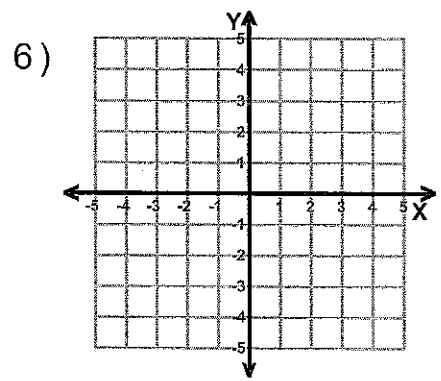
$$y = 2x + 2$$
$$y = -2$$



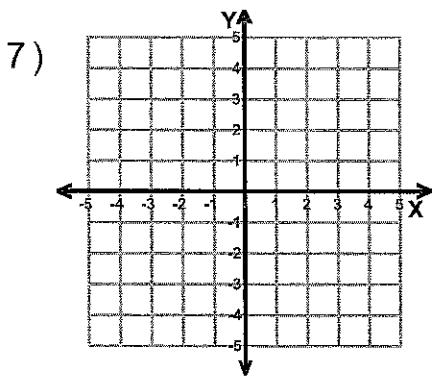
$$y = -\frac{1}{3}x + 1$$
$$x = -3$$



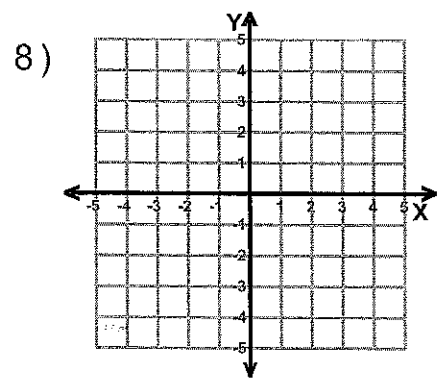
$$y = \frac{1}{3}x + 2$$
$$y = -\frac{1}{2}x + 2$$



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



$$y = \frac{5}{2}x - 4$$
$$y = -x + 3$$



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

MUST Show all

Student Name: _____

Score: _____

work

Systems of Equations – Substitution Method

Solve the following equations:

$$2x + y = 11$$

$$7x = 14$$

$$9x + 8y = 6$$

$$-7x = 14$$

$$6x + 4y = 6$$

$$3x = -15$$

$$7x + 4y = 24$$

$$4x = 16$$

Systems of Equations – Elimination Method

Solve the following equations:

$$2x - y = 17$$

$$x - y = 10$$

$$-x - 7y = 9$$

$$-x + 9y = -23$$

$$3x + y = -14$$

$$-2x - y = 9$$

$$x + 3y = 18$$

$$-x - 4y = -25$$

Systems of Linear Equations

Identify the number of solutions for each system of equations. If the system has one solution, write it as an ordered pair. *(NONE, ONE, INFINITE)*

$$\begin{cases} 3x + y = 7 \\ -2x + y = 2 \end{cases}$$

$$\begin{cases} 2x - y = 4 \\ -6x + 3y = -10 \end{cases}$$

$$\begin{cases} y - 2x = 0 \\ y = -4 \end{cases}$$

$$\begin{cases} 2x + y = 6 \\ -6x + y = 2 \end{cases}$$

$$\begin{cases} x + y = 0 \\ 2x + 5y = 9 \end{cases}$$

$$\begin{cases} x + 9y = 7 \\ -3x + 14y = -21 \end{cases}$$

$$\begin{cases} 2x + y = 47 \\ x + 4y = 111 \end{cases}$$

$$\begin{cases} 3x - 4y = 1 \\ -2x + \frac{8}{3}y = -\frac{2}{3} \end{cases}$$

$$\begin{cases} y = 2x - 1 \\ y = 14 - x \end{cases}$$

$$\begin{cases} y = -3x + 3 \\ y = 5x - 13 \end{cases}$$

$$\begin{cases} y = 8 - 3x \\ 6x + 2y = -4 \end{cases}$$

$$\begin{cases} y = 4x + 8 \\ 11x + 3y = 1 \end{cases}$$

$$\begin{cases} 21x + 10y = 90 \\ -17x - 2y = -18 \end{cases}$$

$$\begin{cases} -x + y = -2 \\ 2x - 3y = -8 \end{cases}$$

$$\begin{cases} 2y - x = 4 \\ 0.5x - y = -2 \end{cases}$$

$$\begin{cases} y = 5x \\ y + 7 = 4x \end{cases}$$

Volume: Cylinders

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

Find the missing measure for each cylinder using the given information. Use π in your calculations if no approximation is given.

$h = 7 \text{ in.}$

$h = 4 \text{ m}$

$h = 8 \text{ yd}$

$h = 10 \text{ cm}$

$r = 3 \text{ in.}$

$d = 4 \text{ m}$

$r = 5 \text{ yd}$

$d = 12 \text{ cm}$

Use 3.14 for π .

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$V = \underline{\hspace{2cm}}$

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$V = \underline{\hspace{2cm}}$

Volume: Cones

$$V = \frac{1}{3} \pi r^2 h$$

Find the missing measure for each cone using the given information. Use π in your calculations if no approximation is given.

$h = 3 \text{ cm}$

$h = 6 \text{ ft}$

$h = 15 \text{ in.}$

$h = 20 \text{ km}$

$r = 5 \text{ cm}$

$d = 2 \text{ ft}$

$r = 20 \text{ in.}$

$r = 15 \text{ km}$

Use 3.14 for π .

$V = \underline{\hspace{2cm}}$

$V = \underline{\hspace{2cm}}$

$V = \underline{\hspace{2cm}}$

$V = \underline{\hspace{2cm}}$

Volume: Spheres

$$V = \frac{4}{3} \pi r^3$$

Find the missing measure for each sphere using the given information. Use π in your calculations if no approximation is given.

$r = 9 \text{ mm}$

$d = 6 \text{ ft}$

$r = 12 \text{ in.}$

$d = 3 \text{ m}$

Use 3.14 for π .

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$V = \underline{\hspace{2cm}}$

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$V = \underline{\hspace{2cm}}$

$V = \underline{\hspace{2cm}}$

Name _____

Solve the problems.

- 1. A busy airport can handle about 66,800,000 passengers per year. Write 66,800,000 in scientific notation.

- 2. Some viruses are as small as 0.000000017 meter in diameter. Write 0.000000017 in scientific notation.

- 3. Calculate $(2.8 \times 10^5) + (3.5 \times 10^6)$.

 **Show your work.**

Answer _____

- 4. Hemoglobin is found in red blood cells. There are about 280,000,000 molecules of hemoglobin in one red blood cell. The average person has 37,000,000,000,000 red blood cells. Find the average number of molecules of hemoglobin in the human body. Write your answer in scientific notation.

 **Show your work.**

Answer _____