

1). Circle the values listed below that are irrational:

$\sqrt{5}$ $\sqrt{16}$ $1/7$
 $2.\bar{3}$ 2π $\sqrt{8}$

Explain why they are irrational.

2). Place the values listed below in descending order:

$(1/2)^3$, $\sqrt{9}$, $-15/5$, π
 3.3 , $(2)^{-2}$, $(-1)^5$, $\sqrt{1}$

3). Fill in the chart below

fraction	decimal	percent
$1/8$		
	$0.\bar{5}$	
		90%
$9/4$		
	$0.\overline{14}$	
		1.0%

4). Compare using $<$, $>$, $=$

π _____ 3.2
 0.45 _____ $0.\bar{4}$
 $3/4$ _____ 0.700
 2^{-2} _____ $1/4$

5). Simplify using exponents:

$$4^3 \times 4^4 =$$

$$7^4 \div 7^3 =$$

6). Write the standard numerical value for:
 $3.25 \times 10^6 =$

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6). Continued

$$9 \times 10^{-7} =$$

At the beginning of 2018, the population of Maine was 1.34 million people. Express this population using scientific notation.

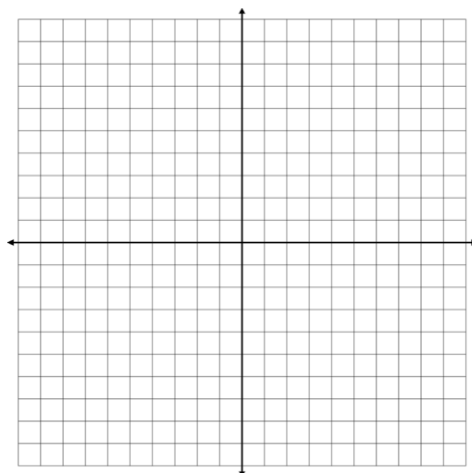
7). Complete the chart

X	Y
1	4
2	7
3	10
-2	-5
5	
	-8

Write an equation that describes the relationship.

Graph the equation on the grid below. What is the slope of the line?

Does this graph define a function – explain why or why not.



8). On the same grid above, also sketch a graph that is not a function and label this graph **A**.

Name _____

9). Write an equation that has:

a) infinite solutions

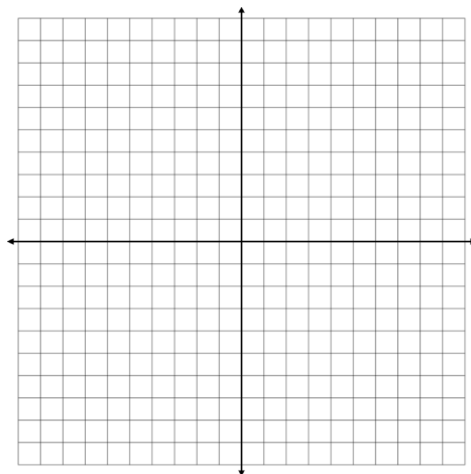
b) no solutions

c) one solution

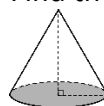
10). Solve and graph the pair of simultaneous linear equations:

$$X + Y = 10$$

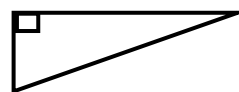
$$2X - Y = 8$$



11). The cone shown below has a radius of 3 cm and height of 9 cm. Find the volume in terms of pi.



12). The legs in the triangle below measure 5cm and 12cm. Find the length of the hypotenuse.



13). Explain the difference between congruence and similarity.

14). Point A has coordinates of $(-5, 4)$. Give the coordinates after this point has been reflected across the y axis.