

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.

Can't be represented as a fraction

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

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

3). Fill in the chart below

fraction	decimal	percent
$1/8$	0.125	12.5%
$5/9$	$0.\bar{5}$	$55 \frac{5}{9}\%$
$9/10$	0.9	90%
$9/4$	2.25	225%
$14/99$	$0.\bar{14}$	$14 \frac{14}{99}\%$
$1/100$	.01	1%

4). Compare using <, >, =

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

5). Simplify using exponents:

$4^3 \times 4^4 = 4^7$
 $7^4 \div 7^3 = 7^1$ or 7

6). Write the standard numerical value for:

$3.25 \times 10^6 = 3,250,000$

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6). Continued

$9 \times 10^{-7} = 0.0000009$

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

1.34×10^6

7). Complete the chart

X	Y
1	4
2	7
3	10
-2	-5
5	16
-3	-8

Write an equation that describes the relationship.

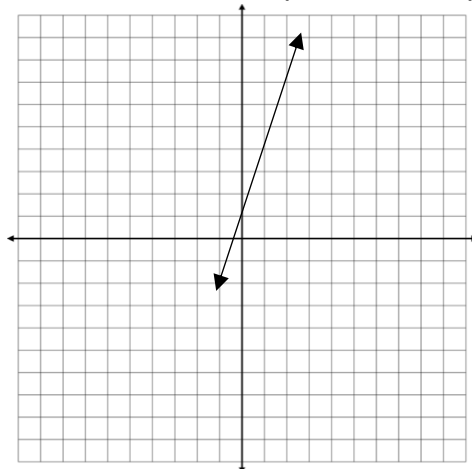
$Y = 3X + 1$

Graph the equation on the grid below.

What is the slope of the line?

Slope = 3/1 or 3

Does this graph define a function – explain why or why not. **Yes, only 1 y-value for each x-value (vertical line test)**



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

Various

KEY

Name _____

9). Write an equation that has:

a) infinite solutions

example: $2x = x + x$

b) no solutions

example: $x = x + 1$

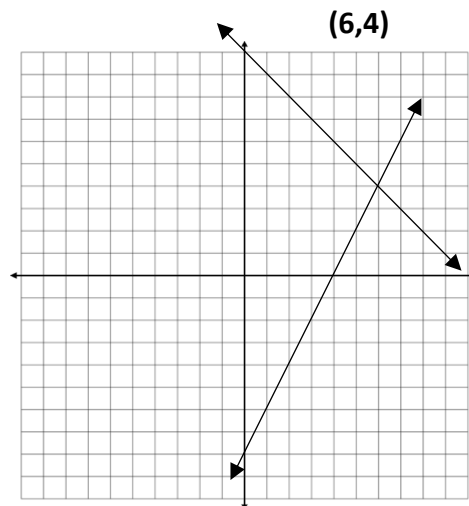
c) one solution

example: $4 = x + 1$

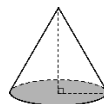
10). Solve and graph the pair of simultaneous linear equations:

$$X + Y = 10$$

$$2X - Y = 8$$

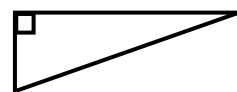


11). The cone shown below has a radius of 3 cm and height of 9 cm. Find the volume in terms of pi.



$$V = 27\pi \text{ cm}^3$$

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



13 cm

13). Explain the difference between congruence and similarity.

Same size & same shape; Same shape

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

(5, 4)