

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

9/11 $\sqrt{10}$ $\sqrt{9}$

5. $\bar{4}$ 3π $\sqrt{16}$

Explain why they are irrational.

-No decimal representation

-Non-ending or non-repeating decimal

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

$(-2/8)^2$, $\sqrt{17}$, $-12/-3$, π

$1/4$, $(3)^{-2}$, $(-1)^8$, $\sqrt{4}$

$(-2/8)^2$, $(3)^{-2}$, $1/4$, $(-1)^8$, $\sqrt{4}$, π , $-12/-3$, $\sqrt{17}$

3). Fill in the chart below

fraction	decimal	percent
1/6	0.1$\bar{6}$	16 2/3%
1/3	0. $\bar{3}$	33 1/3%
3 1/5	3.2	320%
3/4	0.75	75%
2/9	0. $\overline{22}$	22 2/9%
1/2000	0.0005	0.05%

4). Compare using <, >, =

π > $9/3$

0.4 < $0.\bar{4}$

$2/8$ = 0.250

2^{-3} < $1/7$

5). Simplify using exponents:

$$2^3 \times 2^2 = 2^5$$

$$5^5 \div 5^4 = 5^1$$

6). Write the standard numerical value for:

$$0.47 \times 10^7 = 4,700,000$$

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6). Continued

$$95 \times 10^{-3} = 0.095$$

In 2019, the U.S. produced 14.42 billion bushels of corn. Express this amount using scientific notation.

$$1.442 \times 10^{10}$$

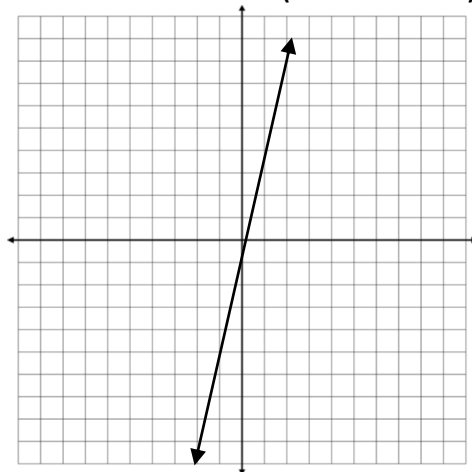
7). Complete the chart

X	Y
1	3
2	7
3	11
-2	-9
5	19
-8	-33

Write an equation that describes the relationship. **$Y = 4X - 1$ or $X = (Y + 1)/4$**

Graph the equation on the grid below. What is the slope of the line? **4**

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) one solution

$$x + 1 = 2 \text{ or various}$$

b) no solutions

$$x + 1 = x + 2 \text{ or various}$$

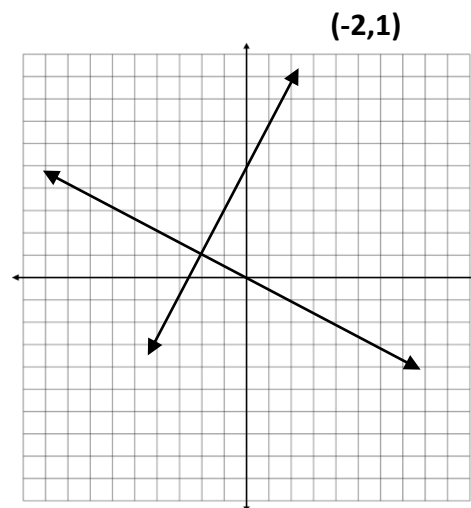
c) infinite solutions

$$x = x \text{ or various}$$

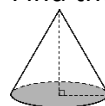
10). Solve and graph the pair of simultaneous linear equations:

$$X + 2Y = 0$$

$$2X - Y = -5$$

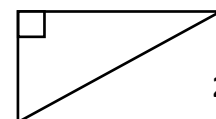


11). The cone shown below has a radius of 6 cm and height of 15 cm. Find the volume in terms of pi.



$$180\pi \text{ cm}^3$$

12). The legs in the triangle below measure 10cm and 24cm. Find the length of the hypotenuse.



26 cm

13). Explain the difference between similarity and congruence.

Same size Same shape & size

14). Point A has coordinates (-4, -6). Give the coordinates after this point has been reflected over the y axis.

(4, -6)