

# The Real Number System Assignment

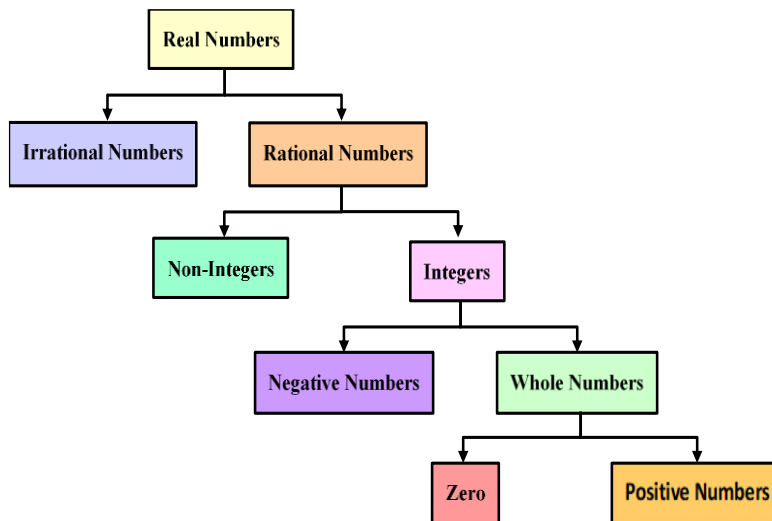
## Answers:

1. Place each number in the most SPECIFIC categories of real numbers they belong.

-14	-6	$-\frac{2}{5}$	30	$\frac{3}{2}$	$-\frac{4}{9}$	0.66	0	8.52	-69.99
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- a) Real Numbers :  $-\frac{2}{5}, -\frac{4}{9}, -69.99, \frac{3}{2}, 0.66, 8.52, -14, -6, 0, 30$
- b) Irrational Numbers :
- c) Rational Numbers :  $-\frac{2}{5}, -\frac{4}{9}, -69.99, \frac{3}{2}, 0.66, 8.52, -14, -6, 0, 30$
- d) Non-integers :  $-\frac{2}{5}, -\frac{4}{9}, -69.99, \frac{3}{2}, 0.66, 8.52$
- e) Integers :  $-14, -6, 0, 30$
- f) Negative Numbers :  $-14, -6$
- g) Whole Numbers :  $0, 30$
- h) Zero :  $0$
- i) Natural Numbers :  $30$

2. Complete the diagram with the family of real numbers.



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3. Represent the following with integers.

- a. An increase of \$10 weekly allowance **+10**
- b. Raising the flag 3 feet higher **+3**
- c. Diving 150 meters below sea level **-150**
- d. Going down the stairs 15 steps **-15**
- e. Walking 10 blocks south **-10**
- f. Weight increase of 1.5 kilograms **+1.5**
- g. A bank deposit of \$1000 **+1000**
- h. \$100 Tom owes from a friend **-100**

3. Arrange the following real numbers as instructed.

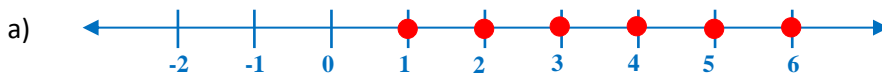
a) Descending

9, -1, 10, 0, 2, 1, -8, -7 **10, 9, 2, 1, 0, -1, -7, -8**

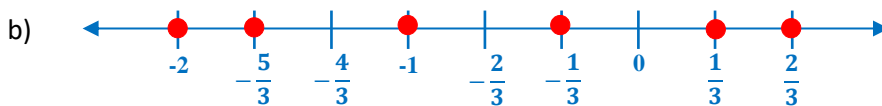
b) Ascending

$\frac{1}{3}, -\frac{1}{2}, -5, -\frac{2}{3}, 2, -3$   **$-5, -3, -\frac{2}{3}, -\frac{1}{2}, \frac{1}{3}, 2$**

c) Name the coordinates of the points graphed on each number line.



**1, 2, 3, 4, 5, 6** (Arranged in order from left to right)

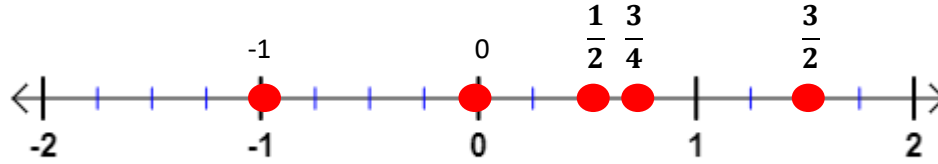


**$-2, -1\frac{2}{3}, -1\frac{1}{3}, -1, -\frac{2}{3}, -\frac{1}{3}, \frac{1}{3}, \frac{2}{3}$**  (Arranged in order from left to right)

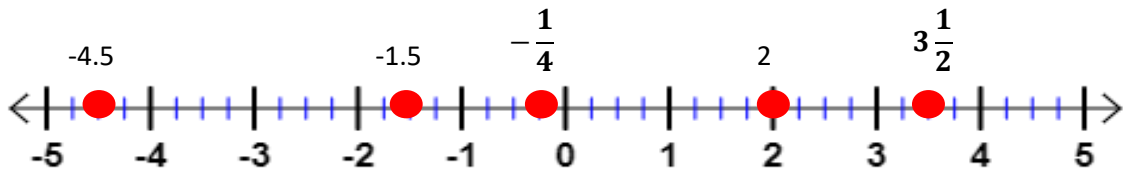
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4. Graph each set of numbers.

a)  $\left\{-1, 0, \frac{1}{2}, \frac{3}{4}, \frac{3}{2}\right\}$



b)  $\left\{-1.5, -\frac{1}{4}, 2, 3\frac{1}{2}, -4.5\right\}$



5. Find each absolute value.

- a)  $|-14| = 14$       b)  $|18| = 18$       c)  $|2.6| = 2.6$       d)  $\left|-\frac{1}{15}\right| = \frac{1}{15}$
- e)  $|-80| = 80$       f)  $|11| = 11$       g)  $|72| = 72$       h)  $|-4| = 4$