

NAME: _____ Score _____/10

Please **print** your name**SHOW ALL YOUR WORK IN A NEAT AND ORGANIZED FASHION****Answers are shown in red. Commentary is shown in blue.**

- (1 pt.) The set of **Natural** Numbers consists of all the counting numbers.(a definition)
- (1 pt.) Which elements of the set $\left\{-8, \frac{5}{7}, \sqrt{5}, 12, \pi, \frac{-3}{8}\right\}$ are rational numbers. Circle your answers. (a definition)
- (1 pt.) Use set builder notation to describe the interval $[4, 6)$.
 $[4, 6) = \{x \mid 4 \leq x < 6\}$ (interval notation and definition/use of set builder notation)

(1 pt.) The opposite of a real number is the number which is **equidistant** from zero but on the **other** side of zero.

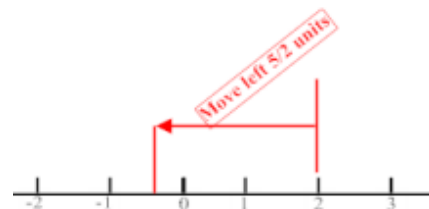
- Write the opposite of the reciprocal of $\frac{-5}{7}$. $\frac{7}{5}$ (two definitions) Do not write $\frac{-5}{7} = \frac{7}{5}$. These two numbers are not equal
- (1 pt.) **T** F Every integer is a rational number. (two definitions)
- (1 pt.) **T** F $\mathbb{Z} \subset \mathbb{Q}$ (set notation and two definitions)
- (1 pt.) Illustrate $2 + \left(-\frac{5}{2}\right)$ on the number line provided.

Computing the sum has nothing to do with this question.

Although $-\frac{1}{2}$ is the sum of 2 and $-\frac{5}{2}$ it is not the "answer".

The answer is a picture--an illustration - not a computation.

The picture should guide your computation not the other way around.



- (2 pt.) Calculate the area of a triangle whose height is 7 and whose base is 5. I want to see the formula you plan to use and I want an exact answer. Not an approximation. No decimals. No mixed numbers.

Use the formula $A = \frac{1}{2}bh$

$$A = \frac{1}{2}(5)(7) = \frac{35}{2}$$

Stop using \bullet to indicate multiplication. Write $\frac{1}{2}(5)(7)$ instead of $\frac{1}{2}5 \bullet 7$

The normal symbol used for area is A not a.

A formula **MUST** be an equation. Avoid mixed numbers and decimals. Algebra is particularly ill-suited for mixed numbers. Algebra likes improper fractions.

Write so that your equations can be read left to right not right to left.