

Name

Key

Directions

You may not look at your notes (or someone else's paper!) while taking this quiz. You may not use a calculator while taking this quiz.

Make sure that you write your solutions using the format discussed and illustrated during class. You should show your scratch work, but do it off to the side and box it off. Do not put any part of your actual solution in a box or circle.

1. List all of the numbers from the set $\left\{0, -11, -\frac{5}{6}, 0.75, \sqrt{5}, \pi, \sqrt{64}\right\}$ that fit into each given category. Please note that a given number more than likely fits into more than one category!

a. The real numbers are $0, -11, -\frac{5}{6}, 0.75, \sqrt{5}, \pi, \sqrt{64}$.

b. The natural numbers are $\sqrt{64}$.

c. The irrational numbers are $\sqrt{5}, \pi$.

d. The integers are $0, -11, \sqrt{64}$.

e. The rational numbers are $0, -11, -\frac{5}{6}, 0.75, \sqrt{64}$.

f. The whole numbers are $0, \sqrt{64}$.

g. The numbers that fit into none of those categories are non-existent.

2. For each inequality, circle T if the inequality is true and circle F if the inequality is false.

a. T or F $-5 \geq -13$

b. T or F $-9 \geq -9$

c. T or F $-17 \geq 6$

d. T or F $\frac{8}{13} \div \frac{8}{13} \leq |-1|$

3. Simplify each expression and write the result in the given blank. Write your scratch work in the box at the bottom of the page - you do not need to worry about the manner in which you write your scratch work.

a. $5y + 3 + 6y$

a. $11y + 3$

b. $3 + (x + 11)$

b. $x + 14$

c. $5(3x + 2) - 4$

c. $15x + 6$

d. $12 + 5(3x + 2)$

d. $15x + 22$

4. State the property used in each equation.

a. $7 + (2x + 18) = 7 + (18 + 2x)$

a. commutative property

b. $7 + (18 + 2x) = (7 + 18) + 2x$

b. associative property

c. $7 + 2(x + 9) = 7 + (2x + 18)$

c. distributive property