

Name : _____ ID. # : _____ SER. # : _____

1. Write True or False for each of the following: (1.5 pt)

- The multiplicative inverse of $-3\frac{2}{5}$ is $-\frac{5}{17}$
- The set of integer numbers is closed under division
- $3 \cdot (x + y) = 3 \cdot (y + x)$ is true by the commutative property of multiplication of real numbers

2. For the set $\{\frac{22}{2}, \sqrt{18}, 3.14, \sqrt{-25}, 94.1589034\dots, -\frac{2}{0}, \frac{2\pi}{\pi}, \sqrt{36}\}$, list

- the prime numbers: (3 pts)
- the composite numbers:
- the rational numbers:
- the irrational numbers:
- the real numbers:

3. If $1 < x < 4$, then write without absolute value bars and simplify :

$$\left| \frac{x-1}{|-x|+|x-4|} \right| \quad (2.5 \text{ pts})$$

4. Write as a single (only one) radical: $\frac{\sqrt{x} \sqrt[3]{x^2}}{\sqrt[4]{x^5}}$ (3 pts)