

Name: _____

1. Simplify each of the following expressions. If the answer is a fraction, reduce it to lowest terms.

(a)
$$\frac{\frac{2}{3}}{\frac{5}{9} - \frac{1}{6}}$$

(b) $| -2 - 8 | - | 5 - 12 |$

2. Consider the following sets:

$$A = \{x \mid -2 \leq x \leq 15\}$$

$$B = \{x \mid x > 0\}$$

- (a) Sketch the graph of the intersection of A and B .
- (b) Write in interval notation $A \cup B$.
3. (a) Write .000457 in scientific notation. _____
- (b) Write 7.24×10^{-3} in decimal notation. _____

4. Simplify the following:

(a) -5^2

(b) $(rs^2)^3(4r^2s^5)$

(c) $(64)^{2/3}$

(d) $8^{1/2}(24^{1/2})$

(e) $\frac{\sqrt{35}}{\sqrt{5}}$

5. (a) Simplify the expression $\sqrt[5]{a^4b}\sqrt[5]{ab^2}$

(b) Rationalize the denominator $\frac{1}{\sqrt[5]{x^2}}$