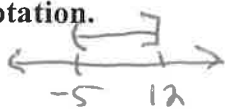


College Prep Algebra  
Quiz P.1-P.2

Name Practice

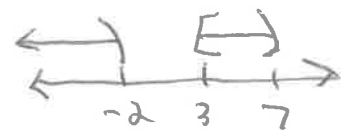
Write in set-builder notation.

1.  $(-5, 12]$



- A.  $\{x | -5 > x > 12\}$
- B.  $\{x | -5 < x \leq 12\}$
- C.  $\{x | -5 \geq x \text{ or } x \geq 12\}$
- D.  $\{x | x \geq -5 \text{ and } x \leq 12\}$

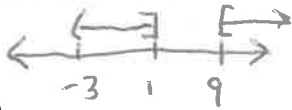
2.  $(-\infty, -2) \cup [3, 7)$



- A.  $\{x | x < -2 \text{ or } 3 \geq x > 7\}$
- B.  $\{x | x \geq -2 \text{ and } 3 > x > 7\}$
- C.  $\{x | x < -2 \text{ or } 3 \leq x < 7\}$
- D.  $\emptyset$

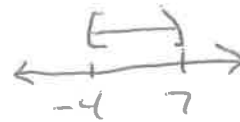
Write in interval notation.

3.  $\{x | -3 < x \leq 1\} \cup \{x | x \geq 9\}$



- A.  $(-\infty, 9]$
- B.  $(-3, 1] \cup [9, \infty)$
- C.  $[-3, 1) \cup (\infty, 9]$
- D.  $\emptyset$

4.  $\{x | -4 \leq x < 7\}$



- A.  $(-4, 7)$
- B.  $[-4, 7)$
- C.  $(-\infty, -4] \cup (7, \infty)$
- D.  $\emptyset$

Simplify.

5.  $\sqrt{24x^5y^4}$

$\sqrt{4 \cdot 6 x^4 y^4}$

- A.  $6x^2y^2\sqrt{2x}$
- B.  $2x^2y^2\sqrt{6x}$
- C.  $4x^2y^2\sqrt{6x}$
- D.  $2y^2\sqrt{6x^5}$

6.  $\frac{-16a^5b^{-1}}{12b^3} = \frac{-4a^5}{3b^4}$

- A.  $\frac{8a^5}{6b^4}$
- B.  $\frac{-4a^5}{3b^4}$
- C.  $\frac{-8a^5}{6b^2}$
- D.  $\frac{-4a^5}{3b^2}$

7.  $(3x^{-2}y^5)^2(4x^2y^{-2}z^2)$

A.  $\frac{36y^8z^2}{x^2}$

- B.  $36x^6y^8z^2$
- C.  $\frac{36y^8z^2}{x^6}$
- D.  $36x^{-2}y^8z^2$

$36x^{-2}y^8z^2$

8.  $\sqrt[3]{54x^5y^2z^8} = \sqrt[3]{27 \cdot 2 x^3 x^2 y^2 z^6 z^2}$

- A.  $2xyz^4\sqrt[3]{3x}$
- B.  $3xz^2\sqrt[3]{3x^2y^2z^2}$
- C.  $xz^2\sqrt[3]{54xy^2z^2}$
- D.  $3xz^2\sqrt[3]{2x^2y^2z^2}$

$$9. (2a^3b^5)(4a^2b^{-6})^{-\frac{1}{2}}$$

$$(2a^3b^5)\left(\frac{1}{2}a^{-1}b^3\right)$$

A.  $4a^2b^2$

B.  $\frac{a^4}{8b^8}$

C.  $a^2b^8$

D.  $\frac{b^2}{4a^4}$

$$1a^2b^8$$

$$10. \frac{4x^{\frac{1}{2}}y^{\frac{1}{2}}}{20x^{\frac{5}{2}}y^2} = \frac{1}{5x^2y^{\frac{5}{2}}}$$

A.  $\frac{1}{5x^3y^2}$

B.  $\frac{1}{5xy^2}$

C.  $\frac{1}{5x^2y^{\frac{5}{2}}}$

D.  $\frac{5y^2}{x^3}$

$$11. 4\sqrt{20x} - \sqrt{45x}$$

$$4\sqrt{4 \cdot 5x} - \sqrt{9 \cdot 5x}$$

A.  $6\sqrt{5x} - \sqrt{45x}$

B.  $8\sqrt{5x} - \sqrt{45x}$

C.  $5\sqrt{5x}$

D.  $11\sqrt{5x}$

$$8\sqrt{5x} - 3\sqrt{5x}$$

$$12. \sqrt{\frac{5}{8x}}$$

$$\frac{\sqrt{5}}{\sqrt{8x}} \frac{\sqrt{8x}}{\sqrt{8x}} = \frac{\sqrt{40x}}{8x} = \frac{\sqrt{4 \cdot 10x}}{8x}$$

A.  $\frac{\sqrt{5}}{2x}$

B.  $\frac{\sqrt{10x}}{4x}$

C.  $\frac{\sqrt{5x}}{64x}$

D.  $\frac{\sqrt{10x}}{2}$

$$= \frac{2\sqrt{10x}}{8x}$$

$$13. (3\sqrt{x} - 4)(5\sqrt{x} + 2) \text{ FOIL}$$

$$15x + 6\sqrt{x} - 20\sqrt{x} - 8$$

A.  $15x - 14\sqrt{x} - 8$

B.  $15x - 8$

C.  $15x - 26\sqrt{x} - 8$

D.  $15x - 2$

$$14. \frac{(2-4\sqrt{x})(3-5\sqrt{x})}{(3+5\sqrt{x})(3-5\sqrt{x})}$$

Conjugate

A.  $\frac{5-2\sqrt{x}-9x}{9+25x}$

B.  $\frac{6-2\sqrt{x}-20x}{9+25x}$

C.  $\frac{6-22\sqrt{x}+20x}{9-25x}$

D.  $\frac{6-20x}{-16x}$

$$\frac{6-10\sqrt{x}-12\sqrt{x}+20x}{9-25x}$$