



Radical Expressions

Student Name: _____ Date: _____

Teacher Name: Robert Beach Score: _____

1) Simplify.

$$\sqrt{150}$$

- A) $5\sqrt{6}$
- B) $25\sqrt{3}$
- C) $5\sqrt{5}$
- D) $3\sqrt{5}$

2) Simplify.

$$\sqrt{192}$$

- A) $2\sqrt{64}$
- B) 4
- C) $4\sqrt{3}$
- D) $8\sqrt{3}$

3) Simplify.

$$\sqrt{100} - \sqrt{9}$$

- A) 13
- B) 3

- C) 7
- D) $\sqrt{109}$

4) Simplify.

$$\sqrt{(x^4y^6)}$$

- A) x^2y^2
- B) x^2y^3
- C) x^2y^{24}
- D) $\sqrt{(x^2y^3)}$

5) Simplify the expression $\sqrt{18} + \sqrt{50}$.

- A) $3\sqrt{2}$
- B) $5\sqrt{2}$
- C) $8\sqrt{2}$
- D) $34\sqrt{2}$

6) Which is a value equivalent to the square root of 18?

- A) 18^2
- B) $2\sqrt{3}$
- C) $3\sqrt{2}$
- D) $|18|$

7) Simplify.

$$\sqrt{75} - \sqrt{12}$$

- A) $\sqrt{63}$
- B) $3\sqrt{7}$
- C) $3\sqrt{3}$
- D) $8\sqrt{3}$

8) Find the simplified product:

$$\sqrt{8} \cdot \sqrt{98}$$

- A) $(2\sqrt{2})(7\sqrt{2})$
- B) $14\sqrt{2}$
- C) 28
- D) $\sqrt{784}$

9) Simplify the radical expression.

$$\sqrt{32x^2y^5}$$

- A) $4xy^2$
- B) $4xy^2\sqrt{2}$
- C) $4xy^2\sqrt{2y}$
- D) $8xy^2\sqrt{y}$

10) Simplify $\sqrt{24x^5y^6}$.

- A) $2x^2y^3\sqrt{6x}$
- B) $4x^2y^3\sqrt{6x}$
- C) $6x^2y^3\sqrt{4x}$
- D) $6x^2y^3\sqrt{2x}$

11) Multiply $(-\sqrt{8x^4y^2})(-\sqrt{12x^4y^2})$

- A) $2x^2y\sqrt{24}$
- B) $2x^4y^2\sqrt{24}$
- C) $4x^2y\sqrt{6}$
- D) $4x^4y^2\sqrt{6}$

12) Multiply $(-\sqrt{30x^3y^2})(-\sqrt{5x^4y^3})$

- A) $5x^6y^4\sqrt{6}$
- B) $5x^3y^2\sqrt{6xy}$
- C) $5x^2y^2\sqrt{6xy}$
- D) $6x^3y^2\sqrt{5xy}$

13) Subtract $\sqrt{27x^5y} - 6\sqrt{3x^5y}$.

- A) $-3\sqrt{3xy}$
- B) $3x^2\sqrt{3xy}$
- C) $-3x^2\sqrt{3xy}$
- D) $-6\sqrt{3x^5y}$

14) $3\sqrt{18} - 2\sqrt{2} =$

- A) $6\sqrt{3} - 2\sqrt{2}$
- B) $7\sqrt{2}$
- C) $11\sqrt{2}$
- D) $18\sqrt{3} - 2\sqrt{2}$

15) $3\sqrt{18} + 3\sqrt{12} + 2\sqrt{27} =$

- A) $3\sqrt{2} + 6\sqrt{3}$
- B) $9\sqrt{2} + 12\sqrt{3}$
- C) $18\sqrt{3}$
- D) $21\sqrt{3}$