

12.6.D2 ~ Rewriting Radicals

Past due on _____ Period _____

Rewrite each radical by extracting all perfect squares. SHOW ALL WORK. (If necessary, refer to the 12.6 example "Simplifying Square Roots" in the Chapter 12 Summary.)

1) $\sqrt{150}$

2) $\sqrt{175}$

3) $\sqrt{96}$

4) $\sqrt{252}$

Solve each quadratic equation by taking square roots. APPROXIMATE the roots to the nearest tenth. (If necessary, refer to the 12.6 example, "Extracting Square Roots to Solve Equations" in the Chapter 12 Summary.)

5) $(x - 5)^2 = 22$

6) $(x + 8)^2 = 29$

Solve each quadratic equation by taking square roots. Rewrite the roots in radical form. DO NOT APPROXIMATE. (If necessary, refer to the 12.6 example, "Extracting Square Roots to Solve Equations" in the Chapter 12 Summary.)

7) $(x + 20)^2 = 80$

8) $(12 - x)^2 = 8$

Factor each polynomial completely. Remember to look for common factors first!

9) $n^2 - 64$

10) $4m^2 + 28m$

11) $2r^2 - 17r - 30$

12) $6x^2 + 5x - 6$

SPIRAL REVIEW

13) Which of the following will result in a binomial of degree 4?

A) $(8n + 6n^4 - 5) - (7n - 4n^4 - 7n^2)$

B) $(3a^2 - 6a + 3a^4) - (8a^4 - 8a^3 - 2a)$

C) $(5x^4 - 3 - 5x) + (6 - 4x^4 - 7x)$

D) $(5r^3 + r^4 - 5) + (4r^4 - 5r^3 - 7)$

14) Which of the following statements about the linear function $2x + 5y = -15$ are TRUE? Select ALL that apply.

A) The y -intercept is $(0, -3)$.

B) The x -intercept is $(-7.5, 0)$.

C) The slope is $-\frac{5}{2}$.

D) The slope is $-\frac{2}{5}$.

15) Which of the following points are solutions to the system of linear inequalities? Select ALL that apply.

$$x + 3y < 6$$

$$5x + 3y \leq -6$$

A) $(-5, -1)$

B) $(1, -4)$

C) $(0, 3)$

D) $(-3, 2)$