

Solving Radical Equations

Date _____ Period _____

CLASS EXAMPLES - Solve each equation.

1) $\sqrt{b-5} = 2$

2) $-1 = \sqrt{x-5}$

Solve each equation.

3) $\sqrt{x-2} + 10 = 11$

4) $17 = 7 + \sqrt{5x}$

5) $\sqrt{6m+10} = 8$

6) $\sqrt{3n+25} = \sqrt{-7-n}$

CLASS EXAMPLES: Solve each equation. Remember to check for extraneous solutions.

7) $\sqrt{72-x} = x$

8) $m = 3 + \sqrt{3m-9}$

Solve each equation. Remember to check for extraneous solutions.

9) $\sqrt{20-n} = n$

10) $m-3 = \sqrt{6m-26}$

11) $2 + \sqrt{6r-5} = r$

12) $-8 = -m + \sqrt{37-4m}$

CLASS EXAMPLES: Solve each equation.

13) $v^{\frac{3}{2}} = 27$

14) $(8p)^{\frac{1}{2}} - 8 = 0$

Solve each equation.

15) $8 + 5p^{\frac{5}{3}} = 5128$

16) $(x+13)^{-\frac{3}{2}} = \frac{1}{27}$

17) $10 = x^{\frac{4}{3}} - 6$

18) $-648 = -3(2x-12)^{\frac{3}{2}}$

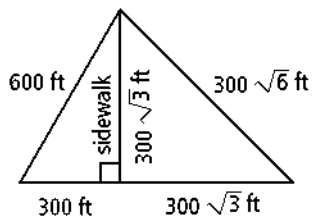
19) The formula $P = 4\sqrt{A}$ relates the perimeter P , in units, of a square to its area A , in square units. What is the area of the square window shown below?



20) The velocity of an object dropped from a tall building is given by the formula $v = \sqrt{64h}$, where v is the velocity, and h is the height. If the Velocity is 32ft/s at the ground level, from what height was the ball dropped?

21) The formula $A = 6V^{\frac{2}{3}}$ relates the surface area A , in square units, of a cube to the volume V , in cubic units. What is the volume of a cube with surface area 486 in.²?

22) A park in the shape of a triangle has a sidewalk dividing it into two parts.



a. If a man walks around the perimeter of the park, how far will he walk?

b. What is the area of the park?

Homework: Finish this sheet, and Pg. 395 #9-33 multiples of 3; and #41.
 (For #41, see example 5 on page 394 first.)