

1. $\sqrt{8x} = 4$

2. $6 = \sqrt{x - 2}$

3. $\sqrt{x + 9} = 1$

12. The formula $s = 3.1\sqrt{d}$ can be used to approximate the speed, in meters per second of a tsunami if the depth of the ocean is d meters. What is the depth of the ocean if the speed of the tsunami is 200 meters per second? Round to nearest whole number.

Solving Radical Equations
Hole-Punch Game

Name _____

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4. $-8 + \sqrt{5n - 5} = -3$

5. $\sqrt{-1 + 2x} = \sqrt{5x - 19}$

11. The formula $d = 3.5\sqrt{h}$ can be used to approximate how far a person can see, in kilometers, from a height of h meters above the ground. A forest ranger is able to see a distance of 17.5 kilometers on a clear day from the observation tower. How tall is the tower?

6. $6 + \sqrt{-1 + 2x} = 11$

10. The greater the distance that water falls in a hydroelectric plant, the more energy is produced. Use $t = 0.25\sqrt{d}$ to approximate the distance d , in feet, that water falls in $t = 3.5$ seconds.

9. The formula $s = 20\sqrt{t + 273}$ gives the speed of sound, in meters per second, when the temperature near the Earth's surface is t degrees Celsius. Find the air temperature if the speed of sound is 346.4 meters per second. Round to nearest whole degree.

7. $12 + \sqrt{7x} = 9$

8. Police officers use the formula $s = \sqrt{21d}$ to approximate the speed in miles per hour, that a car was traveling if it left skid marks that are d feet long. How long would the skid marks be for a car traveling 55 mph?

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