

## Unit 8 - Day 20 - Homework

Solve the equations:

Name: key

1.  $9n^2 - 14 = 4$

$$\begin{array}{r} +14 +14 \\ \hline 9n^2 = 18 \\ \frac{9n^2}{9} = \frac{18}{9} \\ \sqrt{n^2} = \sqrt{2} \\ n = \pm\sqrt{2} \end{array}$$

3.  $\frac{4x^2}{4} = \frac{16}{4}$

$$\begin{array}{r} \sqrt{x^2} = \sqrt{4} \\ x = \pm 2 \end{array}$$

5.  $3x^2 - 3 = 0$

$$\begin{array}{r} +3 +3 \\ \hline 3x^2 = 3 \\ x^2 = 1 \\ x = \pm 1 \end{array}$$

7.  $x^2 - 50 = 71$

$$\begin{array}{r} +50 +50 \\ \hline \sqrt{x^2} = \sqrt{121} \\ x = \pm\sqrt{121} \end{array}$$

9.  $5w^2 + 12 = -8$

$$\begin{array}{r} -12 -12 \\ \hline 5w^2 = -20 \\ \sqrt{w^2} = \sqrt{-4} \\ \text{No real sol.} \end{array}$$

11.  $5d^2 + 5 = 10$

$$\begin{array}{r} -5 -5 \\ \hline 5d^2 = 5 \\ \sqrt{d^2} = \sqrt{1} \\ d = \pm 1 \end{array}$$

2.  $2x^2 + 11 = 11$

$$\begin{array}{r} -11 -11 \\ \hline 2x^2 = 0 \\ \frac{2x^2}{2} = \frac{0}{2} \\ \sqrt{x^2} = \sqrt{0} \\ x = 0 \end{array}$$

4.  $x^2 - 81 = 0$

$$\begin{array}{r} +81 +81 \\ \hline \sqrt{x^2} = \sqrt{81} \\ x = \pm 9 \end{array}$$

6.  $\frac{2m^2}{2} = \frac{100}{2}$

$$\begin{array}{r} \sqrt{m^2} = \sqrt{50} \\ m = \pm\sqrt{50} \end{array}$$

8.  $\frac{16x^2}{16} = \frac{64}{16}$

$$\begin{array}{r} \sqrt{x^2} = \sqrt{4} \\ x = \pm 2 \end{array}$$

10.  $2(x-2)^2 = 18$

$$\begin{array}{r} \frac{2}{2} \frac{2}{2} \\ \sqrt{(x-2)^2} = \sqrt{9} \\ x-2 = 3 \\ x = 5 \end{array}$$

12.  $p^2 + 12 = 12$

$$\begin{array}{r} -12 -12 \\ \hline p^2 = 0 \\ p = 0 \end{array}$$