

Homework Questions?

78. **CRITICAL THINKING** Write your own example of a quadratic equation in the form $x^2 = d$ for each of the following.

a. An equation that has no real solution.

$$x^2 = -12$$

b. An equation that has one solution.

$$x^2 = 0$$

c. An equation that has two solutions.

$$x^2 = 25$$

$$\sqrt{x^2} = \sqrt{d}$$

$$x = \sqrt{0} = 0$$



SOLVING EQUATIONS Use a calculator to solve the equation or write *no solution*. Round the results to the nearest hundredth.

69. $4x^2 - 3 = 57$

70. $6y^2 + 22 = 34$

71. $2x^2 - 4 = 10$

72. $\frac{2}{3}n^2 - 6 = 2$
 $+6 +6$

73. $\frac{4}{5}x^2 + 12 = 5$

74. $\frac{1}{2}x^2 + 3 = 8$
 $-3 -3$

75. $3x^2 + 7 = 31$

76. $6s^2 - 12 = 0$

77. $5a^2 + 10 = 20$

75. $\frac{2}{3}n^2 = 8$
 $\cdot \frac{3}{2} \cdot \frac{3}{2}$

$$\sqrt{n^2} = \sqrt{12}$$

$$n = \pm \underline{3.46}$$

77. $\frac{2}{1} \cdot \frac{1}{2}x^2 = 5$
 $\frac{2}{1}$

$$\sqrt{x^2} = \sqrt{10}$$

$$x = \pm \underline{\hspace{2cm}}$$

9.2 Extra Notes

Rationalize The Denominator

How to eliminate a radical from the denominator by multiplying by an appropriate value of 1.



Example

$$\sqrt{\frac{1}{18}} = \frac{\sqrt{1}}{\sqrt{18}} = \frac{1}{\sqrt{9}\sqrt{2}} = \frac{1 \cdot \sqrt{2}}{3\sqrt{2} \cdot \sqrt{2}}$$

$$= \frac{\sqrt{2}}{3\sqrt{4}} = \frac{\sqrt{2}}{6}$$

$\frac{2}{2} = 1$
 $\frac{5}{5} = 1$

Try It

A) $\sqrt{\frac{5}{6}} = \frac{\sqrt{5} \cdot \sqrt{6}}{\sqrt{6} \cdot \sqrt{6}} = \frac{\sqrt{30}}{\sqrt{36}} = \frac{\sqrt{30}}{6}$

B) $\sqrt{\frac{5}{15}} = \frac{\sqrt{5} \cdot \sqrt{15}}{\sqrt{15} \cdot \sqrt{15}} = \frac{\sqrt{75}}{\sqrt{225}} = \frac{\sqrt{75}}{15} = \frac{\sqrt{25}\sqrt{3}}{15} = \frac{5\sqrt{3}}{15} = \frac{\sqrt{3}}{3}$

$\sqrt{\frac{5}{15}} = \sqrt{\frac{1}{3}} = \frac{\sqrt{1} \cdot \sqrt{3}}{\sqrt{3} \cdot \sqrt{3}} = \frac{\sqrt{3}}{3}$

C) $\sqrt{\frac{4}{10}} = \sqrt{\frac{2}{5}} = \frac{\sqrt{2} \cdot \sqrt{5}}{\sqrt{5} \cdot \sqrt{5}} = \frac{\sqrt{10}}{5}$

D) $\sqrt{\frac{25}{3}} = \frac{\sqrt{25} \cdot \sqrt{3}}{\sqrt{3} \cdot \sqrt{3}} = \frac{5\sqrt{3}}{3}$

9.2 Homework

9.2 p.514 #10-48even

& 9.3 wkst #1-35 odd

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Perfect Squares

4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144, ...