DO NOW

Solve for x. Write your answer in simplest radical form, where necessary.

1) $x^2 - 8 = 28$

$+8 \quad +8$

$\sqrt{x^2} = \sqrt{36}$

$x = \pm\sqrt{36}$

$= \pm 6$

2) $3x^2 = 36$

$\frac{3}{3} \quad \frac{3}{3}$

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

$x = \pm\sqrt{12}$

$= \pm\sqrt{4 \cdot 3}$

$= \pm\sqrt{4}\sqrt{3}$

$= \pm 2\sqrt{3}$

Mar 14-8:55 AM

HW Answers

1) $7\sqrt{2}$

2) $5\sqrt{3}$

3) $4\sqrt{5}$

4) $3\sqrt{6}$

5) ± 4

WORK SHOWN: $x^2 = 16, x = \pm\sqrt{16} = \pm 4$

6) ± 6

WORK SHOWN: $y^2 = 36, y = \pm\sqrt{36} = \pm 6$

7) ± 5

WORK SHOWN: $x^2 - 25 = 0, x^2 = 25, x = \pm\sqrt{25} = \pm 5$

8) ± 3

WORK SHOWN: $3x^2 = 27, x^2 = 9, x = \pm\sqrt{9} = \pm 3$

Mar 17-9:23 AM

Solving an Equation Using Square Roots

Isolate the "squared" expression

$$(x - h)^2 = c$$

Take the square root of both sides

$$x - h = \pm\sqrt{c}$$

Solve for x

$$x = h \pm \sqrt{c}$$

Mar 14-7:10 AM

Solve for x. Write your answer in simplest radical form, where necessary.

$$\sqrt{(x - 5)^2} = \sqrt{25}$$

$x - 5 = \pm 5$

$+5 \quad +5$

$x = \pm 5 + 5$

$x = 5 + 5$

$x = -5 + 5$

$x = 10$ or $x = 0$

Mar 14-9:06 AM

Solve for x. Write your answer in simplest radical form, where necessary.

$$(x + 1)^2 = 16$$

Mar 14-9:06 AM

Solve for x. Write your answer in simplest radical form, where necessary.

$$\frac{2(x - 7)^2}{2} = \frac{98}{2}$$

$$\sqrt{(x-7)^2} = \sqrt{49}$$

$$x - 7 = \pm 7$$

$$+7 \qquad +7$$

$$x = \pm 7 + 7$$

$x = 7 + 7 = \boxed{14}$

or

$x = -7 + 7 = \boxed{0}$

Mar 14-9:06 AM

Solve for x. Write your answer in simplest radical form, where necessary.

$(x + 5)^2 - 7 = 2$

$+7 \quad +7$

$\sqrt{(x+5)^2} = \sqrt{9}$

$x+5 = \pm\sqrt{9}$

$x+5 = \pm 3$

$x+5=3$ $\quad -5 \quad -5$

$x = -2$ or $x+5=-3$ $\quad -5 \quad -5$

$x = -8$

Mar 14-9:06 AM

Solve for x. Write your answer in simplest radical form, where necessary.

$3(x - 1)^2 = 30$

$\frac{3}{} \quad \frac{3}{}$

$\sqrt{(x-1)^2} = \sqrt{10}$

$x-1 = \pm\sqrt{10}$

$x-1=\sqrt{10}$ or $x-1=-\sqrt{10}$

$x=\sqrt{10}+1$ or $x=-\sqrt{10}+1$

Mar 14-9:06 AM

Solve for x. Write your answer in simplest radical form, where necessary.

$2(x + 4)^2 - 10 = 0$

$+10 \quad +10$

$\frac{2(x+4)^2}{2} = \frac{10}{2}$

$\sqrt{(x+4)^2} = \sqrt{5}$

$x + 4 = \pm\sqrt{5}$

$x+4=\sqrt{5}$ $\qquad$ $x+4=-\sqrt{5}$

$x = -4+\sqrt{5}$ or $x = -4-\sqrt{5}$

Mar 14-9:06 AM