5.2
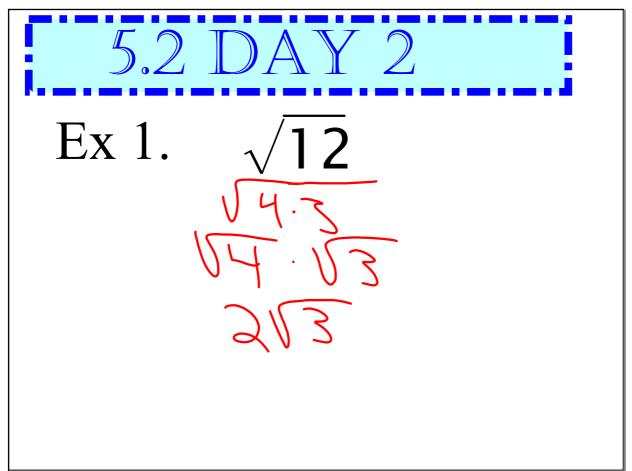
Topic: Reducing Radicals
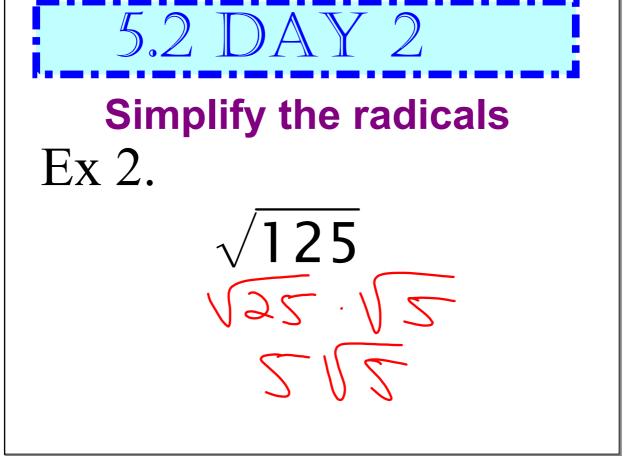
How can you solve a quadratic equation and apply it with real world applications?

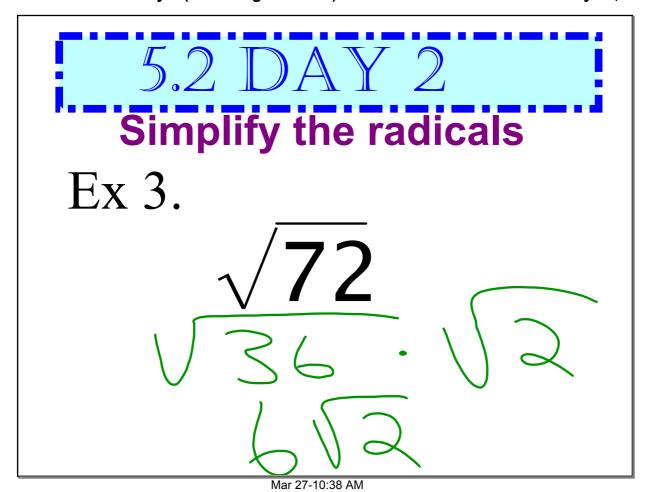Dec 5-9:07 AM

$1^2=1$	$11^2=121$	$21^2=441$
$2^2=4$	$12^2=144$	$22^2=484$
$3^2=9$	$13^2=169$	$23^2=529$
$4^2=16$	$14^2=196$	$24^2=576$
$5^2=25$	$15^2=225$	$25^2=625$
$6^2=36$	$16^2=256$	$26^2=676$
$7^2=49$	$17^2=289$	$27^2=729$
$8^2=64$	$18^2=324$	$28^2=784$
$9^2=81$	$19^2=361$	$29^2=$
$10^2=100$	$20^2=400$	

Dec 4-11:52 AM

5.2 DAY 2

Ex 1. $\sqrt{12}$

$\sqrt{4 \cdot 3}$

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

$2\sqrt{3}$

Dec 5-9:07 AM

5.2 DAY 2

Simplify the radicals

Ex 2.

$\sqrt{125}$

$\sqrt{25} \cdot \sqrt{5}$

$5\sqrt{5}$

Dec 5-9:07 AM

5.2 DAY 2

Simplify the radicals

Ex 3.

$$\sqrt{72}$$

$$\sqrt{36} \cdot \sqrt{2}$$

$$6\sqrt{2}$$

Mar 27-10:38 AM

Simplifying Radicals

Simplify the radical

$$\sqrt{50}$$

$$\sqrt{25} \cdot \sqrt{2}$$

$$5\sqrt{2}$$

Feb 14-7:53 AM

$\sqrt{45}$
$\sqrt{9} \cdot \sqrt{5}$
$3\sqrt{5}$

$\sqrt{243}$
$\sqrt{81} \quad \sqrt{3}$
$9\sqrt{3}$

$\sqrt{700}$

$\sqrt{48}$

$\dfrac{12}{24} = \dfrac{6}{12}$
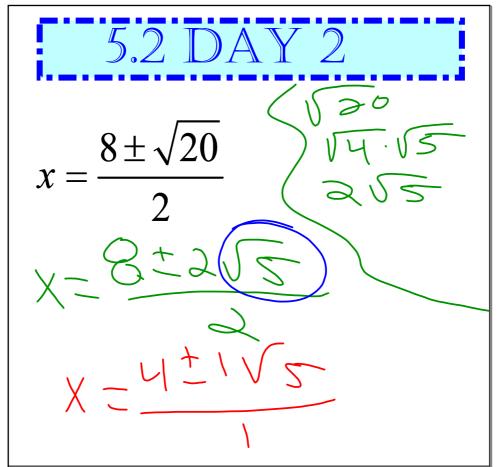
Feb 14-7:51 AM

Simplifying Radicals

Simplify the radical

$\sqrt{35}$

Simplified

Feb 14-11:06 AM

5.2 DAY 2

$$x = \frac{8 \pm \sqrt{20}}{2}$$

$$\sqrt{20}$$
$$\sqrt{4} \cdot \sqrt{5}$$
$$2\sqrt{5}$$

$$x = \frac{8 \pm 2\sqrt{5}}{2}$$

$$x = \frac{4 \pm 1\sqrt{5}}{1}$$

Mar 27-10:38 AM

5.2 DAY 2

$$x = \frac{-4 \pm \sqrt{72}}{8}$$

$$\sqrt{72}$$
$$\sqrt{36}\sqrt{2}$$
$$6\sqrt{2}$$

$$x = \frac{-4 \pm 6\sqrt{2}}{8}$$

$$x = \frac{-2 \pm 3\sqrt{2}}{4}$$

Dec 5-9:18 AM

5.2 DAY 2

$$x = \frac{-4 \pm \sqrt{80}}{8}$$

$$x = \frac{-4 \pm 4\sqrt{5}}{8}$$

$$x = \frac{-1 \pm \sqrt{5}}{2}$$

$\sqrt{80}$

$\sqrt{16}\sqrt{5}$

$4\sqrt{5}$

Feb 14-7:53 AM

5.2 DAY 2

$$x = \frac{-5 \pm \sqrt{42}}{6}$$

Feb 14-11:07 AM

5.2 DAY 2

$$x^2 - 5 = 2x$$

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

$a = 1$
$b = -2$
$c = -5$

$$(-2)^2 - 4(1)(-5)$$

$$24$$

$$x = \frac{2 \pm \sqrt{24}}{2}$$

$\sqrt{24}$
$\sqrt{4}\sqrt{6}$
$2\sqrt{6}$

$$x = \frac{2 \pm 2\sqrt{6}}{2}$$

$$x = \frac{1 \pm 1\sqrt{6}}{1}$$

Mar 27-10:38 AM

$$2x^2 - 12x = -14 + 4x$$
$$-4x$$

$$2x^2 - 16x = -14$$

$$2x^2 - 16x + 14 = 0$$

Feb 14-7:54 AM