Warm Up Find the x-intercepts.

$x^2+0.5x-1.5=0$

$a=1, b=0.5, c=-1.5$

$$x=\frac{-0.5\pm\sqrt{(0.5)^2-4(1)(-1.5)}}{2(1)}$$

$$=\frac{-0.5\pm\sqrt{.25+6}}{2}=\frac{-0.5\pm\sqrt{6.25}}{2}$$

$$x=\frac{-0.5+\sqrt{6.25}}{2} \qquad x=\frac{-0.5-\sqrt{6.25}}{2}$$

$x=1$ AND $x=-1.5$

Example 2: Writing in Standard Form

Solve $3x^2 - 7x = 11$.

$ax^2+bx+c=0$

$-11 \quad -11$

$3x^2-7x-11=0$

$a=3, b=-7, c=-11$

$$x=\frac{7\pm\sqrt{(-7)^2-4(3)(-11)}}{2(3)}=\frac{7\pm\sqrt{49+132}}{6}$$

$$=\frac{7\pm\sqrt{181}}{6}$$

$$x=\frac{7+\sqrt{181}}{6} \quad x=\frac{7-\sqrt{181}}{6}$$

$x=3.41$ AND $x=-1.08$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

2) $3x^2 - 8x = 9$

$-9 \quad -9$

$3x^2 - 8x - 9 = 0$

$a = 3, b = -8, c = -9$

$$x = \frac{8 \pm \sqrt{(-8)^2 - 4(3)(-9)}}{2(3)} = \frac{8 \pm \sqrt{64 + 108}}{6}$$

$$x = \frac{8 \pm \sqrt{172}}{6}$$

$$x = \frac{8 + \sqrt{172}}{6} \qquad x = \frac{8 - \sqrt{176}}{2}$$

$x = 3.52$ $\qquad$ $x = -0.85$

1.69 $\qquad$ -2.692

2.19