

Quadratics HW_5

Monday, May 11, 2015
1:30 PM

<p>Multiply</p> <p>1. $(x+2)(x-4)$</p> <div style="border: 1px solid black; padding: 5px; display: inline-block;">$x^2 - 2x - 8$</div>	<p>Factor</p> <p>2. $x^2 + 11x + 30$</p> <div style="border: 1px solid black; padding: 5px; display: inline-block;">$(x+6)(x+5)$</div>
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<p>Solve</p> <p>3. $8x^2 + 14x - 15 = 0$</p> <div style="border: 1px solid black; padding: 5px; display: inline-block;">$(4x-3)(2x+5) = 0$</div> <div style="margin-left: 20px;"> $4x-3=0 \quad 2x+5=0$ $4x=3 \quad 2x=-5$ <div style="border: 1px solid black; padding: 2px; display: inline-block;">$x = \frac{3}{4}$</div> <div style="border: 1px solid black; padding: 2px; display: inline-block;">$x = -\frac{5}{2}$</div> </div>	<p>Solve</p> <p>4. $3x^2 - 48 = 0$</p> <div style="margin-left: 20px;"> $x^2 = 16$ square root both sides $x = \pm\sqrt{16}$ <div style="border: 1px solid black; padding: 2px; display: inline-block;">$x = 4$ or $x = -4$</div> </div>
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<p>Solve using the quadratic Formula</p> <p>5. $x^2 + 14x + 20 = 0$</p> $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ <p>$a=1$ $b=14$ $c=20$</p> $x = \frac{-(14) \pm \sqrt{(14)^2 - 4(1)(20)}}{2(1)}$ $x = \frac{-14 \pm \sqrt{196 - 80}}{2}$	$x = \frac{-14 \pm \sqrt{116}}{2}$ $x = \frac{-14 + 10.77}{2} \quad \text{or} \quad x = \frac{-14 - 10.77}{2}$ $x = \frac{-3.23}{2} \quad \text{or} \quad x = \frac{-24.77}{2}$ <div style="border: 1px solid black; padding: 5px; display: inline-block;">$x \approx 1.62$ or $x \approx -12.39$</div>
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<p>Solve using the quadratic formula</p> <p>6. $2x^2 - 6x + 3 = 0$</p> <p>$a=2$ $b=-6$ $c=3$</p> $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ $x = \frac{-(-6) \pm \sqrt{(-6)^2 - 4(2)(3)}}{2(2)}$ $x = \frac{6 \pm \sqrt{36 - 24}}{4}$	$x = \frac{6 \pm \sqrt{12}}{4}$ $x = \frac{6 + 3.46}{4} \quad \text{or} \quad x = \frac{6 - 3.46}{4}$ <div style="border: 1px solid black; padding: 5px; display: inline-block;">$x \approx 2.37$ or $x \approx 0.635$</div>
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<p>Solve using the quadratic formula</p> <p>7. $0 = -x^2 + 10x - 8$</p> <p>$a=-1$ $b=10$ $c=-8$</p> $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ $x = \frac{-(10) \pm \sqrt{(10)^2 - 4(-1)(-8)}}{2(-1)}$ $x = \frac{-10 \pm \sqrt{100 - 32}}{-2}$	$x = \frac{-10 \pm \sqrt{68}}{-2}$ $x = \frac{-10 + 8.25}{-2} \quad \text{or} \quad x = \frac{-10 - 8.25}{-2}$ <div style="border: 1px solid black; padding: 5px; display: inline-block;">$x \approx 0.88$ or $x = 9.13$</div>
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