

# Roundtable

<p><b>1. Simplify the radical:</b></p> $\frac{\sqrt{32}}{\sqrt{16} \sqrt{2}}$ $4\sqrt{2}$	<p><b>2. Simplify the radical:</b></p> $\frac{\sqrt{54}}{\sqrt{4} \sqrt{13}}$ $2\sqrt{13}$
<p><b>3. Simplify the radical:</b></p> $\frac{\sqrt{28}}{\sqrt{4} \sqrt{7}}$ $2\sqrt{7}$	<p><b>4. Solve using the quadratic formula:</b></p> $x^2 - 8x + 6 = 0$ <p> <math>a=1</math>  <math>b=-8</math>  <math>c=6</math> </p> $\frac{(-8) \pm \sqrt{(-8)^2 - 4(1)(6)}}{2}$ <div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;"> <math>\frac{\sqrt{40}}{\sqrt{4} \sqrt{10}} = 2\sqrt{10}</math> </div> $x = \frac{8 \pm \sqrt{40}}{2}$ $x = \frac{8 \pm 2\sqrt{10}}{2} = \boxed{4 \pm \sqrt{10}}$ <p>Could you have solved by factoring? How do you know?</p> <p>no not perfect square discriminant</p>
<p><b>5. Solve using the quadratic formula:</b></p> $x^2 + 4x = 21$ $x^2 + 4x - 21 = 0$ <p> <math>a=1</math>  <math>b=4</math>  <math>c=-21</math> </p> $\frac{4 \pm \sqrt{4^2 - 4(1)(-21)}}{2}$ $x = \frac{4 \pm \sqrt{100}}{2}$ $x = \frac{-4 \pm 10}{2}$ $x = \frac{-4+10}{2} = \frac{6}{2} = 3$ $x = \frac{-4-10}{2} = \frac{-14}{2} = -7$ <p> <math>x^2 + 4x - 21 = 0</math>  <math>(x+7)(x-3) = 0</math>  <math>x+7=0 \quad x-3=0</math>  <math>x=-7 \quad x=3</math> </p> <p>Could you have solved by factoring? How do you know?</p> <p>Yes discriminant is perfect square</p>	<p><b>6. Solve using the quadratic formula:</b></p> $2x^2 = 13x - 10$ $-2x^2 - 13x + 10 = 0$ <p> <math>a=-2</math>  <math>b=13</math>  <math>c=10</math> </p> $\frac{13 \pm \sqrt{13^2 - 4(-2)(10)}}{2(-2)}$ $x = \frac{13 \pm \sqrt{89}}{-4}$ <p>cannot reduce</p> <p>Could you have solved by factoring? How do you know?</p> <p>no discriminant not a perfect square</p>