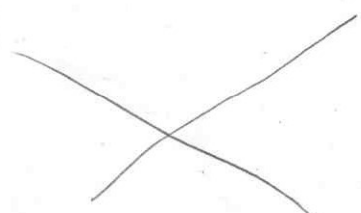


Solving Quadratic Equations using the Quadratic Formula - Recording Sheet

Show ALL work!

<p>1 ✓ $4x^2 - 7x - 92 = 0$</p> <p>$a = 4$ $b = -7$ $c = -92$</p> $x = \frac{7 \pm \sqrt{(-7)^2 - 4(4)(-92)}}{2(4)}$ $x = \frac{7 \pm \sqrt{1521}}{8} \rightarrow x = \frac{7 \pm 39}{8}$ <p>$\frac{7+39}{8} \rightarrow \boxed{\frac{23}{4}}$ $\frac{7-39}{8} \rightarrow \boxed{-4}$</p>	<p>2 ✓ $6x^2 - 4x - 2 = 0$</p> <p>$a = 6$ $b = -4$ $c = -2$</p> $x = \frac{4 \pm \sqrt{(-4)^2 - 4(6)(-2)}}{2(6)}$ $x = \frac{4 \pm \sqrt{164}}{12} \rightarrow \frac{4 \pm 8}{12}$ <p>$\frac{4+8}{12} \rightarrow \boxed{1}$ $\frac{4-8}{12} \rightarrow \boxed{-\frac{1}{3}}$</p>
<p>3 ✓ $2x^2 + 12x + 13 = 0$</p> <p>$a = 2$ $b = 12$ $c = 13$</p> $x = \frac{-12 \pm \sqrt{(12)^2 - 4(2)(13)}}{2(2)}$ $x = \frac{-12 \pm \sqrt{40}}{4} \rightarrow \frac{-12 \pm 2\sqrt{10}}{4}$ <p>$x = \frac{-6 \pm \sqrt{10}}{2}$</p>	<p>4 ✓ $5x^2 + 8x - 15 = 0$</p> <p>$a = 5$ $b = 8$ $c = -15$</p> $x = \frac{-8 \pm \sqrt{(8)^2 - 4(5)(-15)}}{2(5)}$ $x = \frac{-8 \pm \sqrt{364}}{10} \rightarrow \frac{-8 \pm 2\sqrt{91}}{10}$ <p>$x = \frac{-4 \pm \sqrt{91}}{5}$</p>
<p>5 ✓ $4x^2 + 4x - 35 = 0$</p> <p>$a = 4$ $b = 4$ $c = -35$</p> $x = \frac{-4 \pm \sqrt{(4)^2 - 4(4)(-35)}}{2(4)}$ $x = \frac{-4 \pm \sqrt{576}}{8} \rightarrow \frac{-4 \pm 24}{8}$ <p>$\frac{-4+24}{8} \rightarrow \boxed{\frac{5}{2}}$ $\frac{-4-24}{8} \rightarrow \boxed{-\frac{7}{2}}$</p>	<p>6 ✓ $11x^2 + x - 2 = 0$</p> <p>$a = 11$ $b = 1$ $c = -2$</p> $x = \frac{-1 \pm \sqrt{(1)^2 - 4(11)(-2)}}{2(11)}$ <p>$= \frac{-1 \pm \sqrt{89}}{22}$</p>
<p>7 ✓ $3x^2 - 7x - 98 = 0$</p> <p>$a = 3$ $b = -7$ $c = -98$</p> $x = \frac{7 \pm \sqrt{(-7)^2 - 4(3)(-98)}}{2(3)}$ $x = \frac{7 \pm \sqrt{1225}}{6} \rightarrow \frac{7 \pm 35}{6}$ <p>$\frac{7+35}{6} \rightarrow \boxed{7}$ $\frac{7-35}{6} \rightarrow \boxed{-\frac{14}{3}}$</p>	<p>8 ✓ $5x^2 + 10x + 2 = 0$</p> <p>$a = 5$ $b = 10$ $c = 2$</p> $x = \frac{-10 \pm \sqrt{(10)^2 - 4(5)(2)}}{2(5)}$ $= \frac{-10 \pm \sqrt{160}}{10} \rightarrow \frac{-10 \pm 2\sqrt{15}}{10}$ <p>$= \frac{-5 \pm \sqrt{15}}{5}$</p>

<p>9 ✓ $3x^2 + 12x + 3 = 0$</p> <p>$a=3$ $x = \frac{-12 \pm \sqrt{(12)^2 - 4(3)(3)}}{2(3)}$</p> <p>$b=12$</p> <p>$c=3$ $x = \frac{-12 \pm 6\sqrt{3}}{6}$</p> <p>$x = -2 \pm \sqrt{3}$</p>	<p>10 ✓ $6x^2 + 5x - 69 = 0$</p> <p>$a=6$ $x = \frac{-5 \pm \sqrt{(5)^2 - 4(6)(-69)}}{2(6)}$</p> <p>$b=5$</p> <p>$c=-69$ $x = \frac{-5 \pm \sqrt{1681}}{12} \rightarrow \frac{-5 \pm 41}{12}$</p> <p>$x = \frac{-5+41}{12} \rightarrow 3$ $\frac{-5-41}{12} \rightarrow \frac{-23}{6}$</p>
<p>11 ✓ $10x^2 - 6x - 17 = 0$</p> <p>$a=10$ $x = \frac{6 \pm \sqrt{(-6)^2 - 4(10)(-17)}}{20}$</p> <p>$b=-6$</p> <p>$c=-17$ $x = \frac{6 \pm 2\sqrt{179}}{20}$</p> <p>$x = \frac{3 \pm \sqrt{179}}{10}$</p>	<p>12 ✓ $4x^2 + 10x + 6 = 0$</p> <p>$a=4$ $x = \frac{-10 \pm \sqrt{(10)^2 - 4(4)(6)}}{2(4)}$</p> <p>$b=10$</p> <p>$c=6$ $= \frac{-10 \pm \sqrt{4}}{8} \rightarrow \frac{-10 \pm 2}{8}$</p> <p>$\frac{-10+2}{8} \rightarrow -1$ $\frac{-10-2}{8} \rightarrow \frac{-3}{2}$</p>
<p>13</p> 	<p>14 ✓ $3x^2 - x - 16 = 0$</p> <p>$a=3$ $x = \frac{1 \pm \sqrt{(-1)^2 - 4(3)(-16)}}{2(3)}$</p> <p>$b=-1$</p> <p>$c=-16$ $x = \frac{1 \pm \sqrt{193}}{6}$</p>
<p>15 ✓ $x^2 + 2x - 99 = 0$</p> <p>$a=1$ $x = \frac{-2 \pm \sqrt{(2)^2 - 4(1)(-99)}}{2(1)}$</p> <p>$b=2$</p> <p>$c=-99$ $x = \frac{-2 \pm \sqrt{400}}{2} \rightarrow \frac{-2 \pm 20}{2}$</p> <p>$\frac{-2+20}{2} \rightarrow 9$ $\frac{-2-20}{2} \rightarrow -11$</p>	<p>16 ✓ $4x^2 + 9x + 5 = 0$</p> <p>$a=4$ $x = \frac{-9 \pm \sqrt{(9)^2 - 4(4)(5)}}{2(4)}$</p> <p>$b=9$</p> <p>$c=5$ $x = \frac{-9 \pm \sqrt{1}}{8} \rightarrow \frac{-9 \pm 1}{8}$</p> <p>$x = \frac{-9+1}{8} \rightarrow -1$ $\frac{-9-1}{8} \rightarrow \frac{-5}{4}$</p>