

4.REV.2 – QUADRATIC FUNCTIONS CIRCUIT

Begin by completing the problem in cell #1. Search for your answer in the remaining cells. Put #2 in the problem blank: # _____. Work that question and proceed in this manner until you complete the circuit.

ALL WORK MUST BE SHOWN FOR CREDIT TO BE RECEIVED.

<p>Answer: -0.74 & 4.74</p> <p># 1 Complete the square; find the vertex and the range of $y = x^2 + 2x - 35$</p>	<p>Answer: -2</p> <p># _____ Factor completely to find the x-intercepts: $y = 6x^2 - 18x - 60$</p>
<p>Answer: $(-3, 25)$; $(-\infty, 25]$ or $y \leq 25$</p> <p># _____ Factor completely to find the x-intercepts: $y = 12x^2 - 17x - 7$</p>	<p>Answer: $(3, -22)$; $[-22, \infty)$ or $y \geq -22$</p> <p># _____ Find the x-intercepts of $y = -2x^2 + 8x + 7$ <i>If necessary, round to 2 decimal places.</i></p>
<p>Answer: -2.63 & 0.63</p> <p># _____ Factor completely to find the x-intercepts: $y = -2x^2 + 2x + 112$</p>	<p>Answer: $x = -2$; $(0, -3)$</p> <p># _____ Find the x-intercepts of $y = 3x^2 - 18x + 5$ <i>If necessary, round to 2 decimal places.</i></p>
<p>Answer: 0.29 & 5.71</p> <p># _____ Write the quadratic function in the appropriate form with vertex $(-2, 6)$ & that passes through $(-1, 3)$. Identify the value of a.</p>	<p>Answer: $(2, -11)$; $(-\infty, -11]$ or $y \leq -11$</p> <p># _____ Write the quadratic function in the appropriate form with x-intercepts of -6 & 12 and that passes through $(14, 4)$. Identify the value of a.</p>

<p>Answer: $-\frac{1}{3}$ & $\frac{7}{4}$</p> <p>#_____ Find the axis of symmetry and y-intercept of $y = -2(x + 3)^2 - 1$</p>	<p>Answer: $-\frac{1}{3}$ & $\frac{3}{2}$</p> <p>#_____ Find the vertex and the range of $y = -(x - 4)^2 + 1$</p>
<p>Answer: $\frac{1}{10}$</p> <p>#_____ Complete the square; find the vertex and the range of $y = 3x^2 - 18x + 5$</p>	<p>Answer: $x = -3$; $(0, -19)$</p> <p>#_____ Find the x-intercepts of $y = -3x^2 - 6x + 5$ <i>If necessary, round to 2 decimal places.</i></p>
<p>Answer: -7 & 8</p> <p>#_____ Write the quadratic function in the appropriate form with vertex $(4, -1)$ & that passes through $(8, 3)$. Identify the value of a.</p>	<p>Answer: $(4, 1)$; $(-\infty, 1]$ <i>or</i> $y \leq 1$</p> <p>#_____ Write the quadratic function in the appropriate form with x-intercepts of 1 & 9 and that passes through $(0, -18)$. Identify the value of a.</p>
<p>Answer: -3</p> <p>#_____ Factor completely to find the x-intercepts: $y = 6x^2 - 7x - 3$</p>	<p>Answer: -2 & 5</p> <p>#_____ Complete the square; find the vertex and the range of $y = -x^2 - 6x + 16$</p>
<p>Answer: $\frac{1}{4}$</p> <p>#_____ Find the vertex and the range of $y = -3(x - 2)^2 - 11$</p>	<p>Answer: $(-1, -36)$; $[-36, \infty)$ <i>or</i> $y \geq -36$</p> <p>#_____ Find the axis of symmetry and y-intercept of $y = 0.25(x + 2)^2 - 4$</p>