

Name:

Date:

Period:

Extending Your Thinking: Square Root Method

Error Analysis

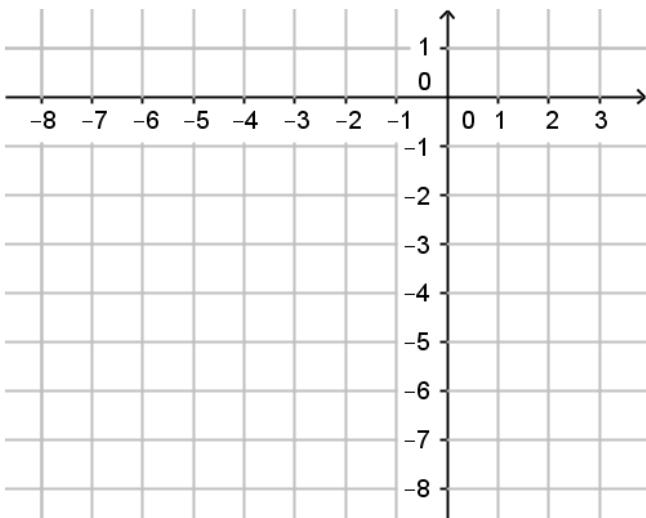
Circle the error in the work shown below with a colored pencil.	Describe the error and how to fix it in words.	Show the correct work to solve correctly.
$4(x-1)^2 = 8$ $\sqrt{(4x-4)^2} = \sqrt{8}$ $4x-4 = \pm 2\sqrt{2}$ $x = \frac{4 \pm 2\sqrt{2}}{4}$ $x = 1 \pm \frac{\sqrt{2}}{2}$		
$(x+1)^2 - 4 = 5$ $\sqrt{(x+1)^2} = \sqrt{9}$ $x+1 = 3$ $x = 2$ $x = \pm 2$		
$3(x-5)^2 - 5 = 7$ $3(x-5)^2 = 12$ $(x-5)^2 = 4$ $x^2 - 25 = 4$ $\sqrt{x^2} = \sqrt{29}$ $x = \pm \sqrt{29}$		
$(2x-6)^2 - 12 = 0$ $\sqrt{(2x-6)^2} = \sqrt{12}$ $2x-6 = \pm \sqrt{12}$ $\frac{2x}{2} = \frac{6 \pm \sqrt{12}}{2}$ $x = \frac{6 \pm \sqrt{12}}{2}$ $x = 3 \pm \sqrt{6}$		
$-2(x^2 - 6) = -24$ $\sqrt{(x^2 - 6)} = \sqrt{12}$ $x-6 = \pm \sqrt{12}$ $x = 6 \pm \sqrt{12}$ $x = 6 \pm 2\sqrt{3}$		

Graphing in Vertex Form

$$y = \frac{1}{2}(x + 3)^2 - 7$$

- a) Identify the vertex (h, k) .
- b) Identify the y-intercept $(0, y)$. Show your work.
- c) Use the square root method to find the x-intercepts $(x, 0)$ and $(x, 0)$. Show your work.

- d) Use the information above to sketch the graph.



$$y = -2(x - 2)^2 + 4$$

- a) Identify the vertex (h, k) .
- b) Identify the y-intercept $(0, y)$. Show your work.
- c) Use the square root method to find the x-intercepts $(x, 0)$ and $(x, 0)$. Show your work.

- d) Use the information above to sketch the graph.

