

Math Battle "Sketch your function!"

3/31/2018

1. Sketch graph of the following function: $y = (x + 2)^2 - 2$
2. Sketch graph of the following function: $y = \frac{1}{x-2} - 2$
3. Sketch graph of the following function: $y = |x| + |-x|$
4. Sketch graph of the following function: $y = |2x - 2|$
5. Sketch graph of the following function: $y = \frac{1}{-x-2}$
6. Sketch graph of the following function: $y = |(x + 2)^2 - 2|$
7. Solve graphically by plotting two functions, verify that the solution you found graphically indeed works.

$$(x + 1)^2 - 2 = 3 + 2x$$

$$y_1 = (x + 1)^2 - 2$$

$$y_2 = 3 + 2x$$

8. Solve graphically by plotting two functions, verify that the solution you found graphically indeed works.

$$(x + 1)^2 + 2 = -x + 1$$

$$y_1 = (x + 1)^2 + 2$$

$$y_2 = -x + 1$$