

Section 1.1:

(a) Sketch the graph of the function (b) tell if graph is symmetric to the x-axis, y-axis, origin, or not symmetric (c) Algebraically prove symmetry for graphs in #1 and #6.

1. $y = 2x^2 - 3$

2. $y = 3(x + 1)^2$

3. $y = x^2 + 2x + 1$

4. $y = |x| - 2$

5. $y = |x + 1| - 1$

6. $y = 3x^3$

7. $y^2 = x + 1$ [Hint: In y_1 put $y = \sqrt{x + 1}$ and in y_2 put $y = -\sqrt{x + 1}$]

8. $(y - 2)^2 = x$ [Hint: In y_1 put $y = \sqrt{x} + 2$ and in y_2 put $y = -\sqrt{x} + 2$]

9. $y = x^4 + |x| + x^3$

10. $y = \frac{x}{x+1}$