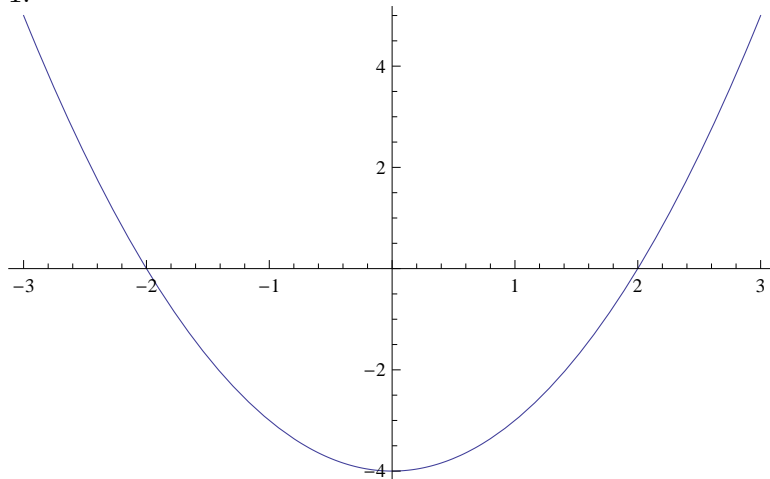


Finding Equations of Quadratic & Polynomial Curves

Find the equations of the following curves. Don't forget to look at:

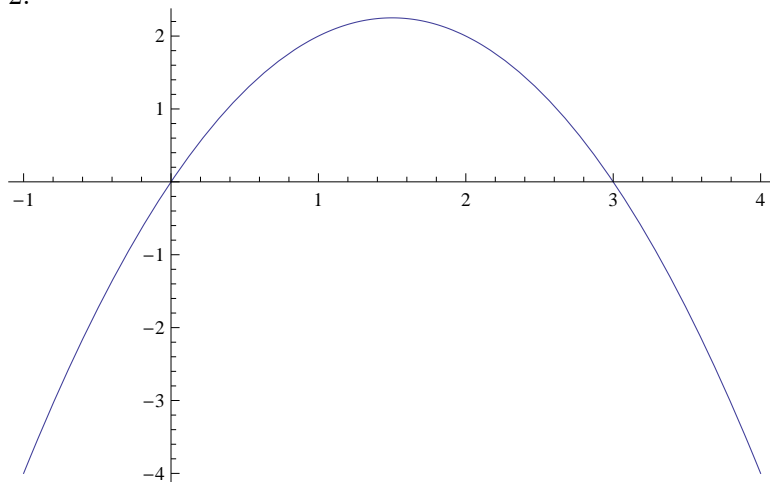
- What happens when x gets large.
- Where the curve crosses the y -axis.
- *How* the curve interacts with the x -axis (cross, touch, inflection).

1.



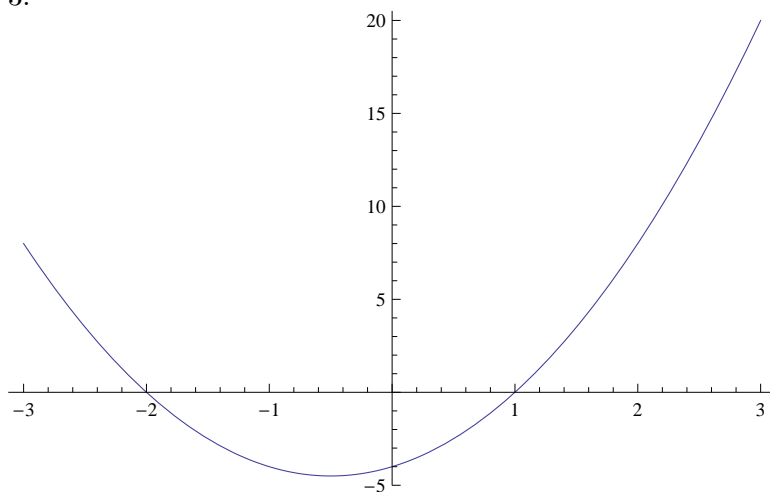
$$y = (x - 2)(x + 2)$$

2.



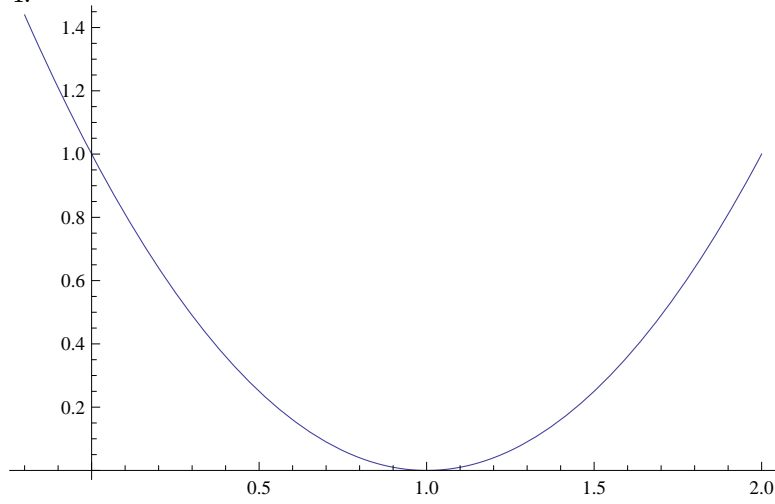
$$y = -x(x - 3)$$

3.



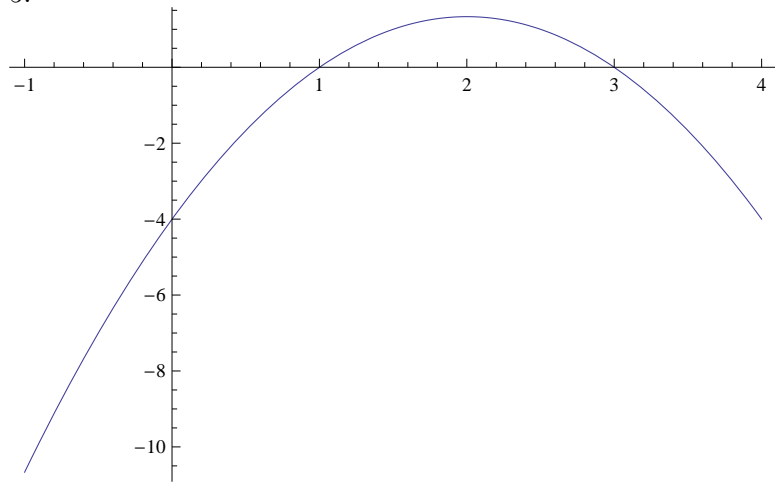
$$y = 2(x - 1)(x + 2)$$

4.



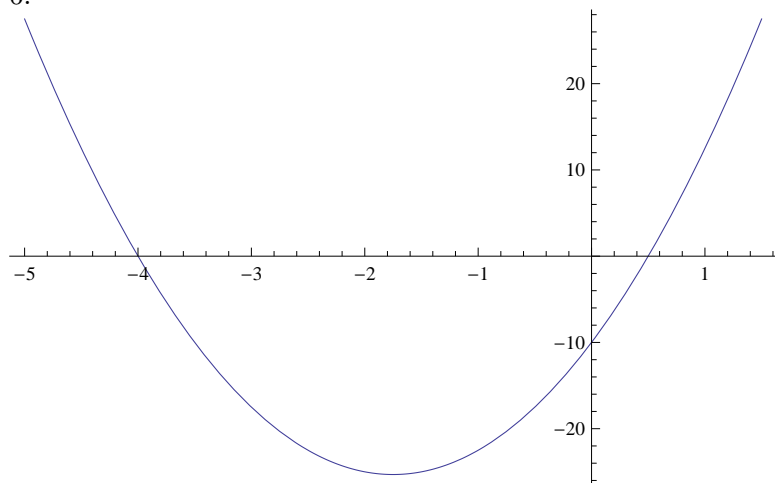
$$y = (x - 1)^2$$

5.



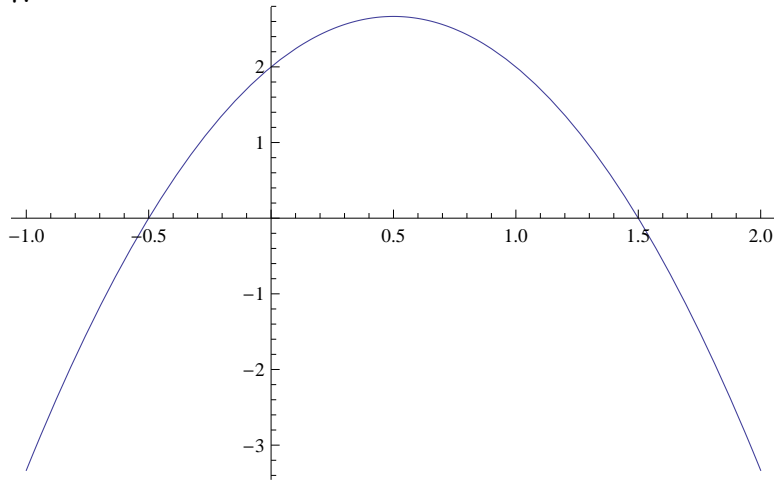
$$y = -\frac{4}{3}(x - 1)(x - 3)$$

6.



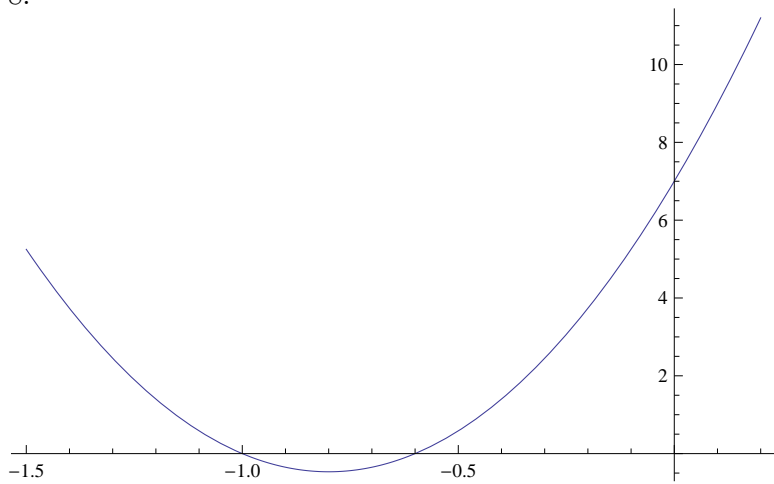
$$y = \frac{5}{2}(x + 4)(2x - 1)$$

7.



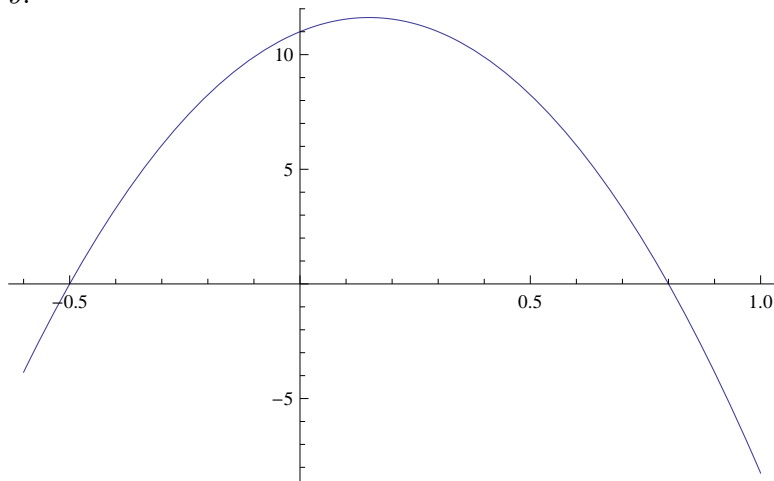
$$y = -\frac{2}{3}(2x + 1)(2x - 3)$$

8.



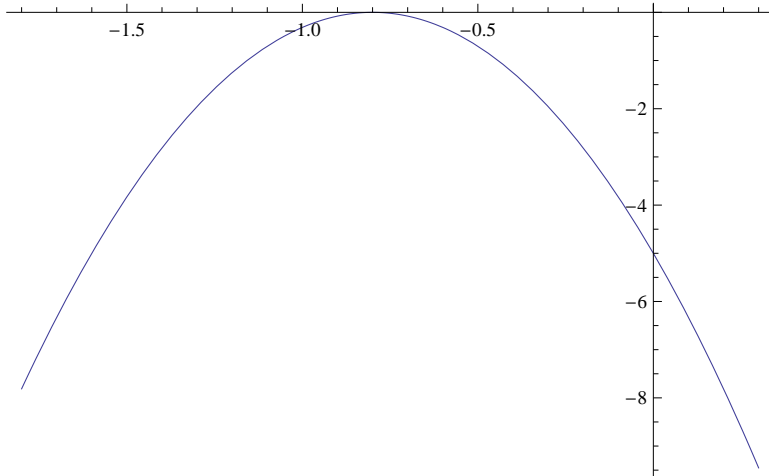
$$y = \frac{7}{3}(x + 1)(5x + 3)$$

9.



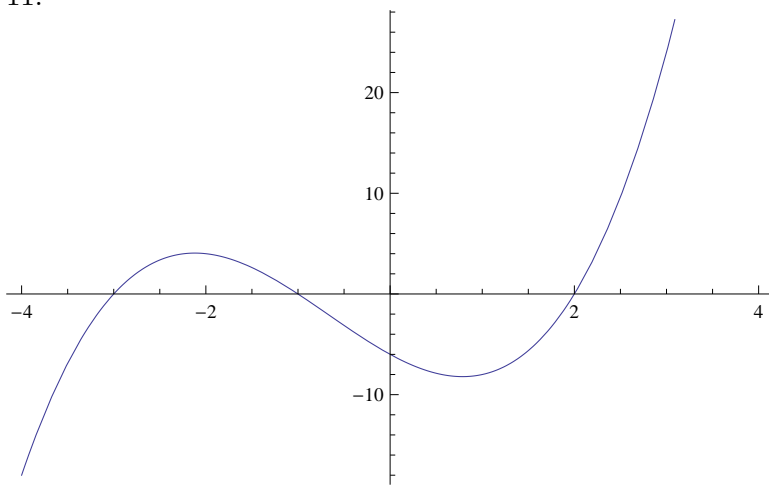
$$y = -\frac{11}{4}(2x + 1)(5x - 4)$$

10.



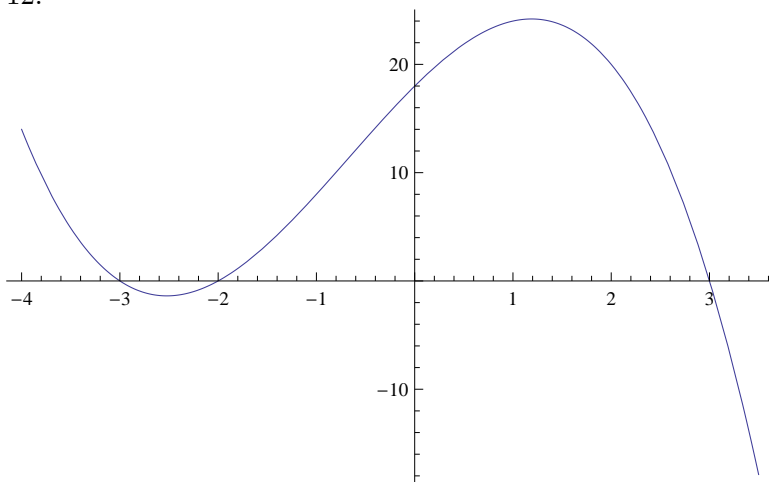
$$y = -\frac{5}{16}(5x + 4)^2$$

11.



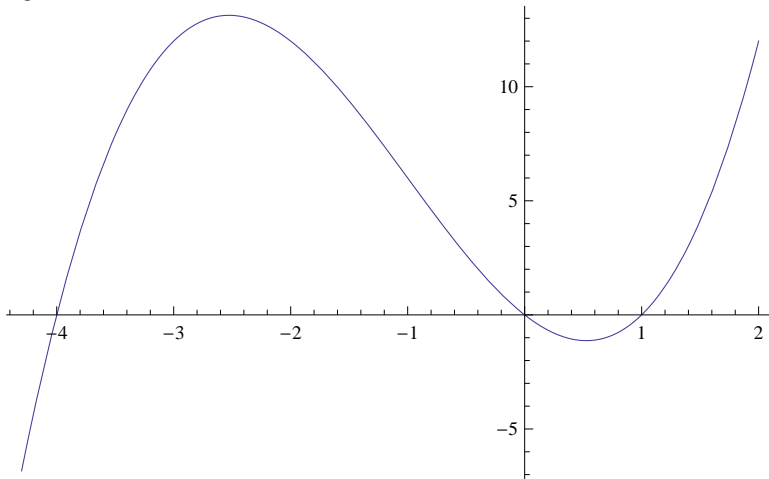
$$y = (x - 2)(x + 1)(x + 3)$$

12.



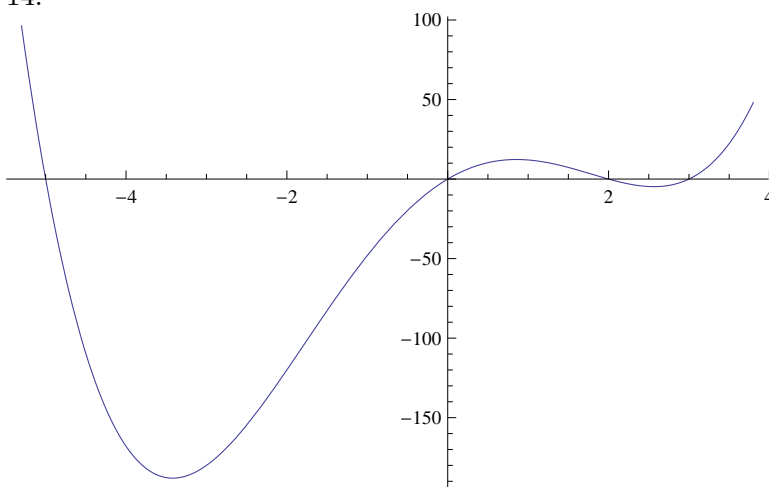
$$y = -(x - 3)(x + 2)(x + 3)$$

13.



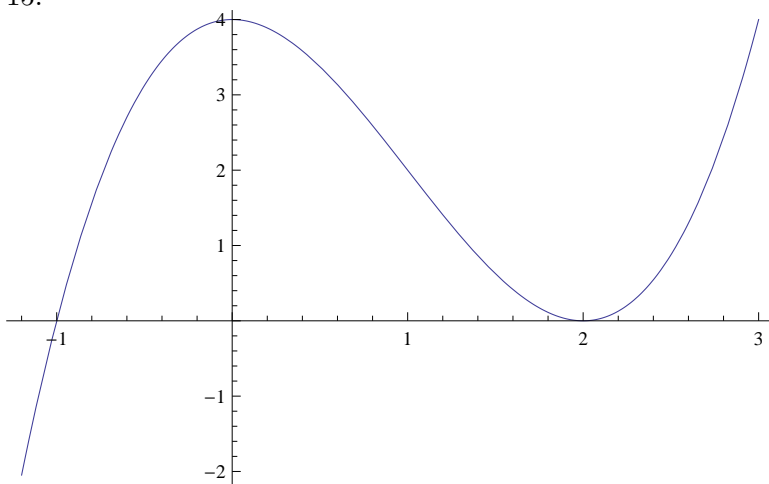
$$y = x(x - 1)(x + 4)$$

14.



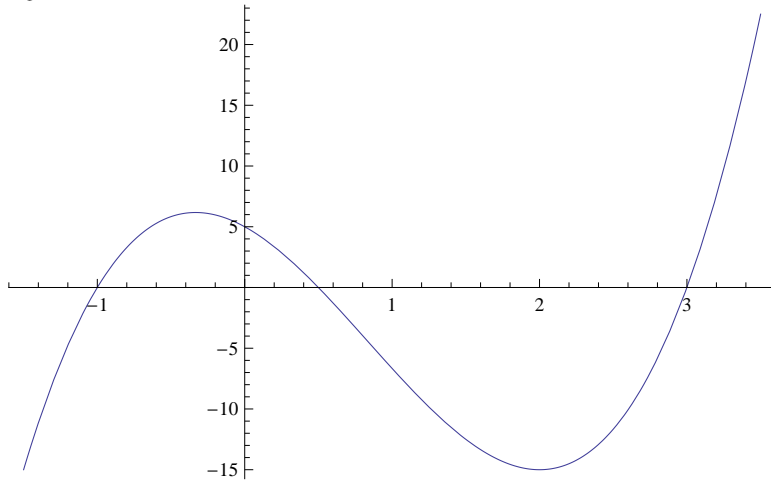
$$y = x(x - 2)(x - 3)(x + 5)$$

15.



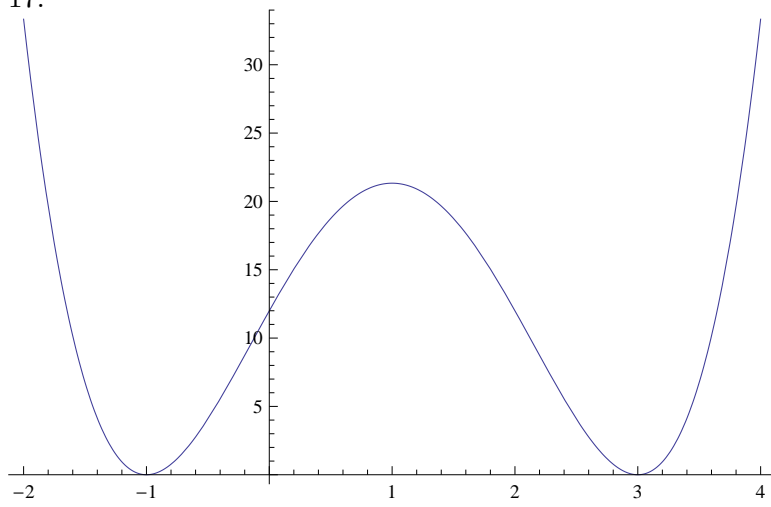
$$y = (x - 2)^2(x + 1)$$

16.



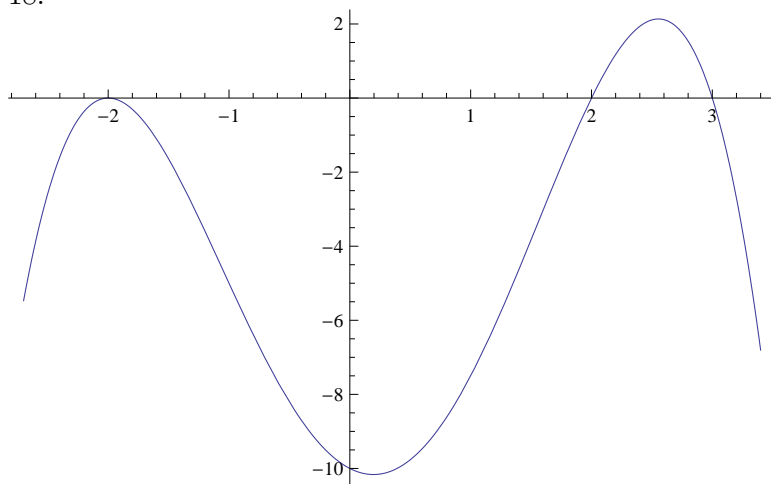
$$y = \frac{5}{3}(x - 3)(x + 1)(2x - 1)$$

17.



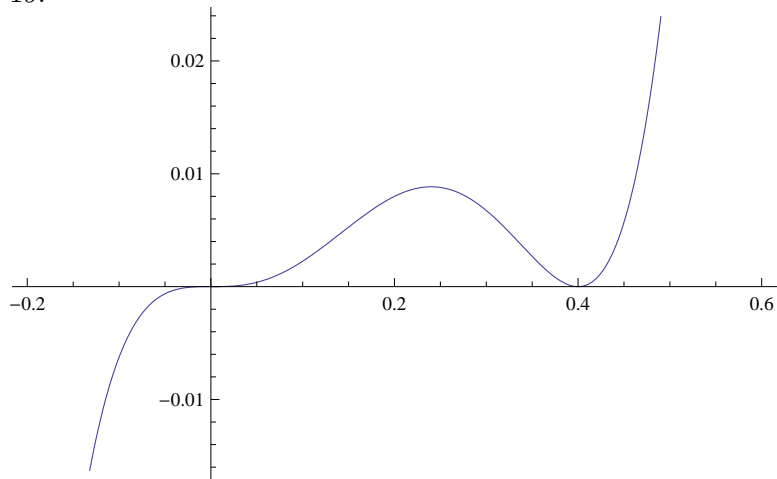
$$y = \frac{4}{3}(x - 3)^2(x + 1)^2$$

18.



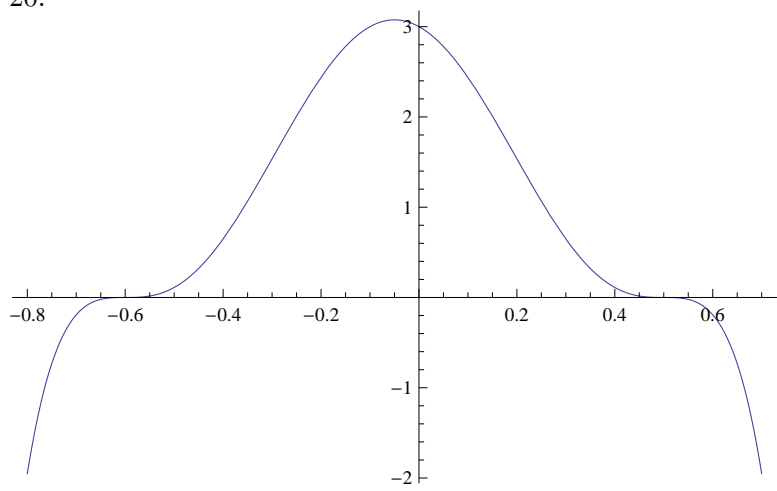
$$y = -\frac{5}{12}(x - 2)(x - 3)(x + 2)^2$$

19.



$$y = x^3(5x - 2)^2$$

20.



$$y = -\frac{1}{9}(2x - 1)^3(5x + 3)^3$$