

2.7 HW

Sketch the graph of each of the following polynomials.

4. $y = (x + 5)(x - 1)^2(x - 7)$

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

6. $f(x) = -x(x + 8)(x + 1)$

7. $y = x(x + 4)(x^2 - 1)(x - 4)$

Write a polynomial equation for a function with a graph that bounces off the x -axis at $(-1, 0)$, crosses it at $(4, 0)$, and goes through the point $(-2, -18)$.

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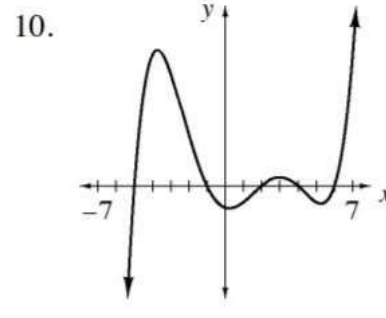
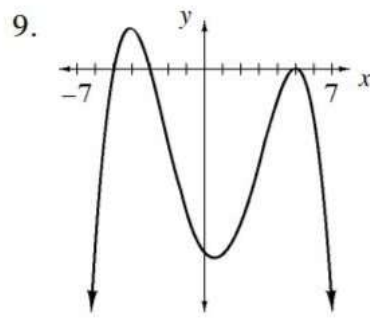
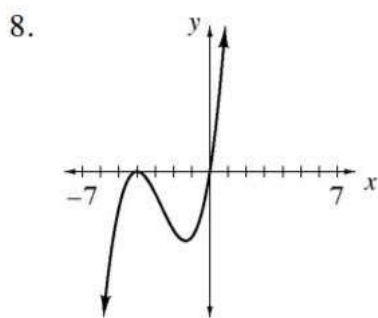
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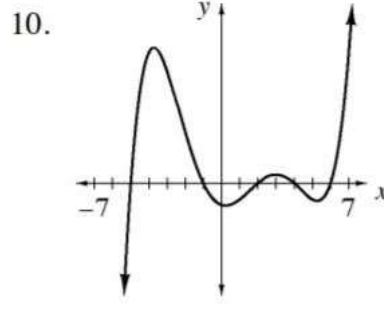
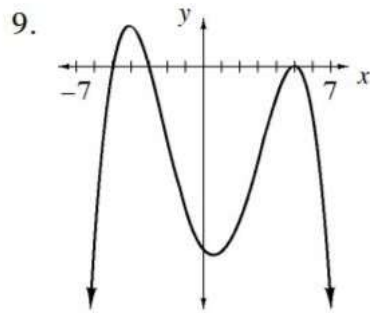
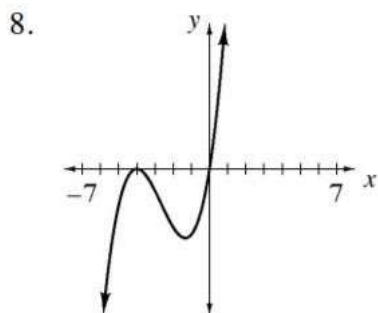
Write a polynomial equation for a function with a graph that bounces off the x -axis at $(-1, 0)$, crosses it at $(4, 0)$, and goes through the point $(-2, -18)$.

Below are the complete graphs of some polynomial functions. Based on the shape and location of the graph, describe all the roots of the polynomial function, its degree, and orientation. Be sure to include information such as whether or not a root is a double or triple root.



Also, write an equation that *could* represent the graph.

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