### 3.4 Graphing Polynomials Outcome R12

Sketch the following functions, clearly indicating the $y$-intercept and the x-intercept(s):

1. $g(x)=-(x-1)^{2}(x+4)$

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

3. $y=x(x+1)(x+5)$
4. $y=(x-1)(x+3)^{2}$


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

6. $f(x)=(x-6)(x-2)^{3}$

7. $f(x)=x(x+6)^{3}$

8. $f(x)=-x^{2}(x+7)$

9. Write an equation that represents the graph of the polynomial below.

