### Lesson 11 Practice Problems

1. What are the points of intersection between the graphs of the functions $f(x)=x^{2}(x+1)$ and $g(x)=x+1$?
2. Select **all** the points of intersection between the graphs of the functions $f(x)=(x+5)(x−2)$ and $g(x)=(2x+1)(x−2)$.
	1. $(-5,0)$
	2. $(-\frac{1}{2},0)$
	3. $(-2,-12)$
	4. $(2,0)$
	5. $(4,18)$
	6. $(5,30)$
3. What are the solutions to the equation $(x−3)(x+5)=-15$?
4. What are the $x$-intercepts of the graph of $y=(5x+7)(2x−1)(x−4)$?
	1. $-\frac{7}{5},-\frac{1}{2},4$
	2. $\frac{5}{7},\frac{1}{2},4$
	3. $-\frac{7}{5},\frac{1}{2},4$
	4. $\frac{5}{7},2,4$
* (From Unit 2, Lesson 5.)
1. Which polynomial function’s graph is shown here?
* 
	1. $f(x)=(x+1)(x+2)(x+4)$
	2. $f(x)=(x+1)(x−2)(x+4)$
	3. $f(x)=(x−1)(x+2)(x−4)$
	4. $f(x)=(x−1)(x−2)(x−4)$
* (From Unit 2, Lesson 7.)
1. Draw a rough sketch of the graph of $g(x)=-x^{2}(x+2)$.
* (From Unit 2, Lesson 10.)
1. The graph of a polynomial function $f$ is shown.
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	1. Is the degree of the polynomial odd or even? Explain how you know.
	2. What is the constant term of the polynomial?
* (From Unit 2, Lesson 9.)



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