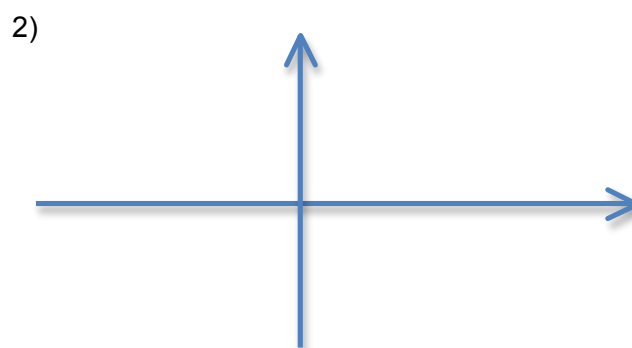
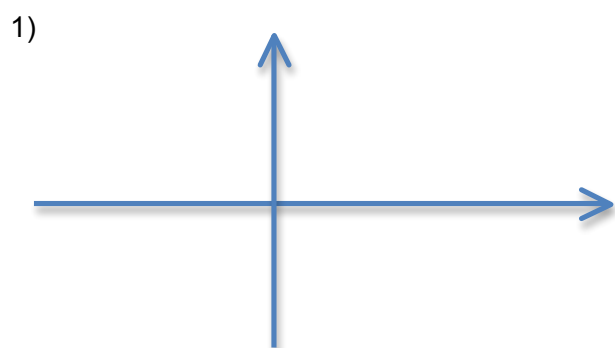


Worksheet 5.2
Graphing Polynomial Functions from Factored Form

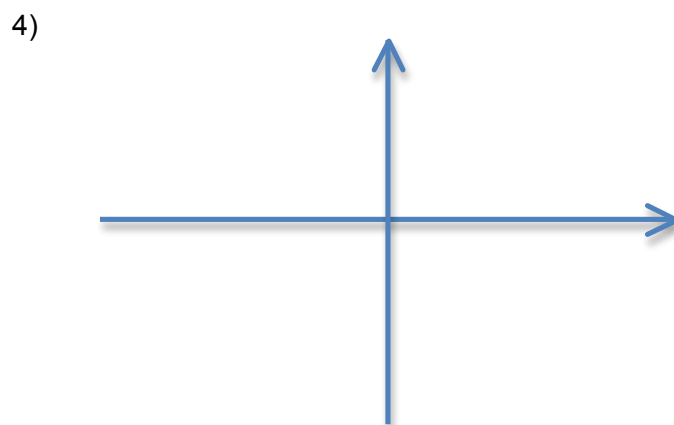
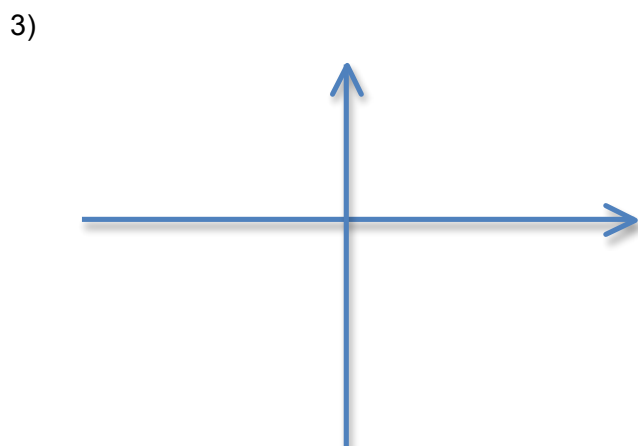
Name _____

Sketch the graph of each polynomial function.

Function	n degree	a Lead coef.	End Behavior (use n and a)	x-intercepts
$f(x) = (x+1)^2(x-2)(x-3)$				
$f(x) = -2(x+3)^3(x-2)^2$				



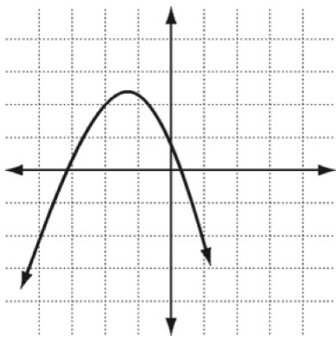
Function	n degree	a Lead coef.	End Behavior (use n and a)	x-intercepts
3. $f(x) = (x-1)^3(x+4)^2$				
4. $f(x) = x(x+3)(x+1)(x-1)(x-3)$				



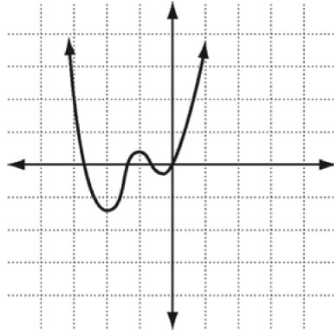
More Practice

Use the graphs to fill in the table

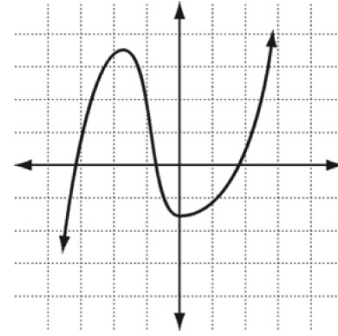
1.



2.



3.

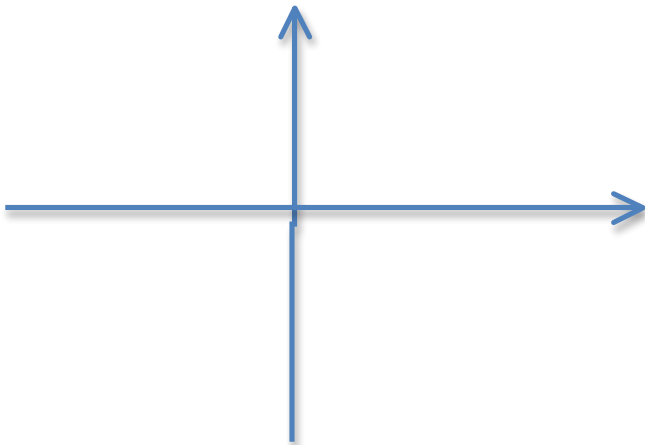


Function	n degree (circle one)	Lead coef. (circle one)	End Behavior	How many x - intercepts?
1.	Odd Even	Positive negative		
2.	Odd Even	Positive negative		
3.	Odd Even	Positive negative		

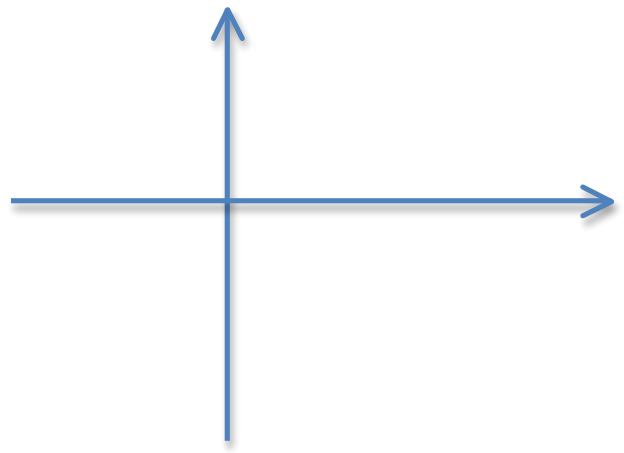
Fill in the table for each of the following functions, then sketch the graphs.

Function	n degree	a Lead coef.	End Behavior (use n and a)	x -intercepts
4. $f(x) = x(x-4)^2$				
5. $f(x) = -x^2(x-2)(x+1)$				

4)



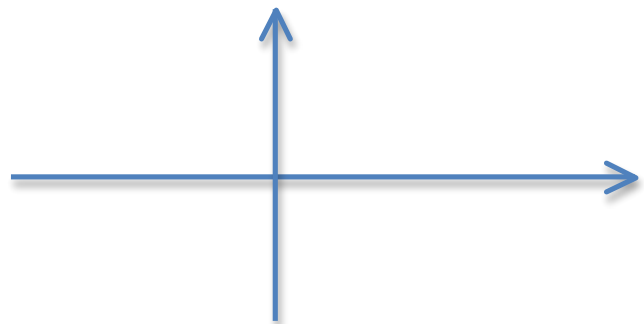
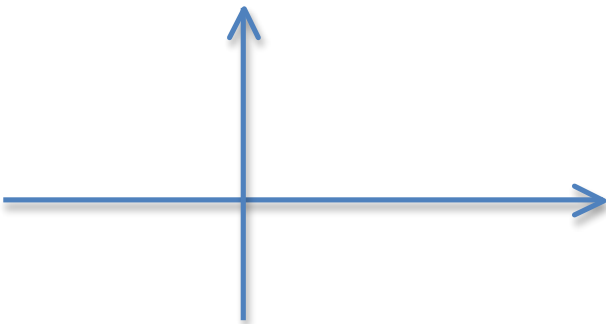
5)



Function	n degree	a Lead coef.	End Behavior (use n and a)	x-intercepts
6. $f(x) = -(x-1)^2(x+3)$				
7. $f(x) = (x+2)(x-3)(x-1)$				

6. $f(x) = -(x-1)^2(x+3)$

7. $f(x) = (x+2)(x-3)(x-1)$



Now state the intervals where the function is above (positive) or below (negative) the x-axis. Use inequality notation.

above x-axis (function is positive)

above x-axis (function is positive)

below x-axis (function is negative)

below x-axis (function is negative)
