

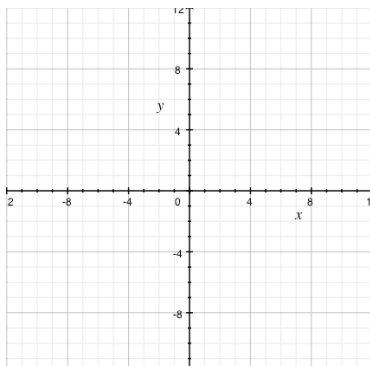


Name _____ Date _____ Period _____

GRAPHING POLYNOMIALS WORKSHEET #1

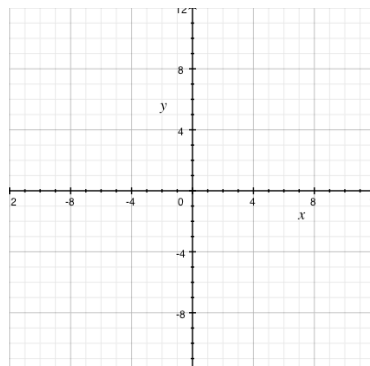
Directions: Graph the following polynomials. Identify the end behavior.

1. $p(x) = (x - 4)^2$



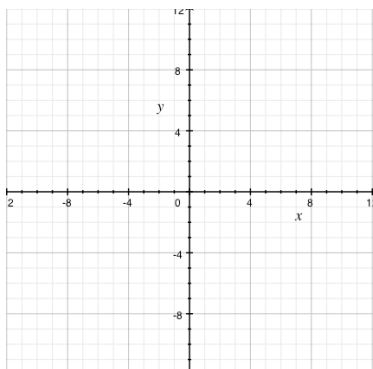
As $x \rightarrow \infty$, $f(x) \rightarrow \underline{\hspace{1cm}} \infty$ and
as $x \rightarrow -\infty$, $f(x) \rightarrow \underline{\hspace{1cm}} \infty$

2. $p(x) = (x + 5)^2$



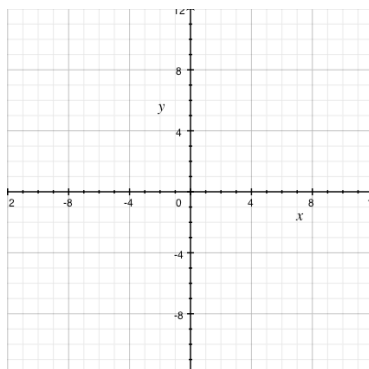
As $x \rightarrow \infty$, $f(x) \rightarrow \underline{\hspace{1cm}} \infty$ and
as $x \rightarrow -\infty$, $f(x) \rightarrow \underline{\hspace{1cm}} \infty$

3. $p(x) = x(x - 2)(x + 1)$



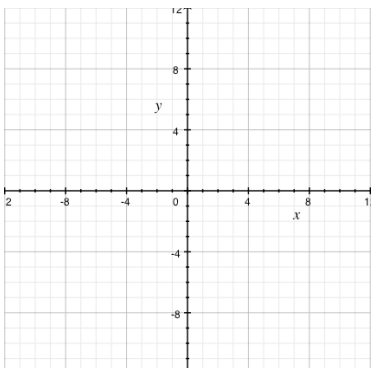
As $x \rightarrow \infty$, $f(x) \rightarrow \underline{\hspace{1cm}} \infty$ and
as $x \rightarrow -\infty$, $f(x) \rightarrow \underline{\hspace{1cm}} \infty$

4. $p(x) = (x + 6)^2(x - 3)$



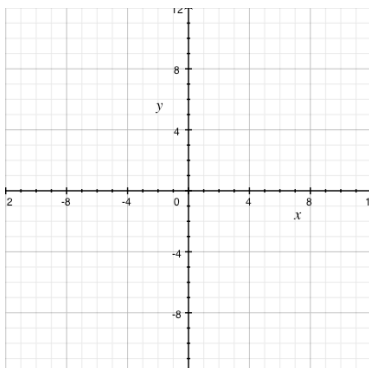
As $x \rightarrow \infty$, $f(x) \rightarrow \underline{\hspace{1cm}} \infty$ and
as $x \rightarrow -\infty$, $f(x) \rightarrow \underline{\hspace{1cm}} \infty$

5. $p(x) = (x - 1)^3(x + 4)^2(x - 2)$



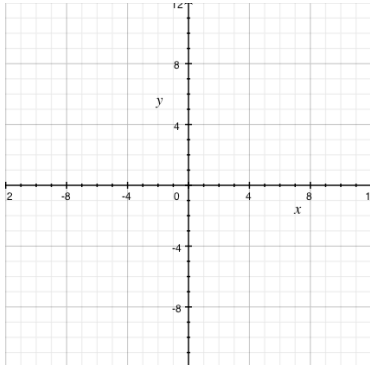
As $x \rightarrow \infty$, $f(x) \rightarrow \underline{\hspace{1cm}} \infty$ and
as $x \rightarrow -\infty$, $f(x) \rightarrow \underline{\hspace{1cm}} \infty$

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



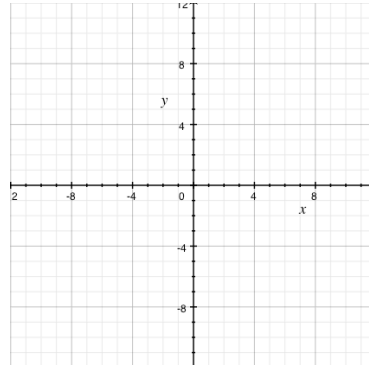
As $x \rightarrow \infty$, $f(x) \rightarrow \underline{\hspace{1cm}} \infty$ and
as $x \rightarrow -\infty$, $f(x) \rightarrow \underline{\hspace{1cm}} \infty$

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



As $x \rightarrow \infty, f(x) \rightarrow \underline{\hspace{1cm}} \infty$ and
 as $x \rightarrow -\infty, f(x) \rightarrow \underline{\hspace{1cm}} \infty$

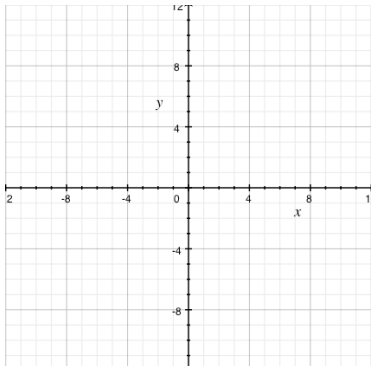
8. $p(x) = (x + 5)(x + 2)^2(x - 3)^2$



As $x \rightarrow \infty, f(x) \rightarrow \underline{\hspace{1cm}} \infty$ and
 as $x \rightarrow -\infty, f(x) \rightarrow \underline{\hspace{1cm}} \infty$

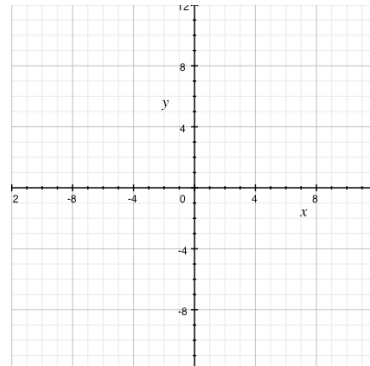
Directions: Factor the polynomial into linear terms, graph the polynomial, and identify its end behavior.

9. $p(x) = x^4 - 2x^3 - 3x^2$



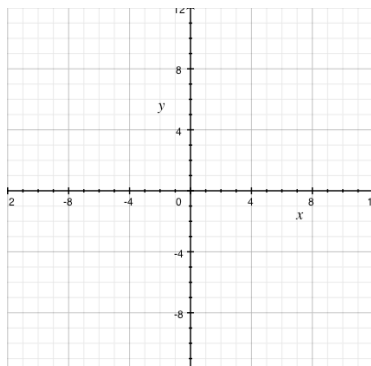
As $x \rightarrow \infty, f(x) \rightarrow \underline{\hspace{1cm}} \infty$ and
 as $x \rightarrow -\infty, f(x) \rightarrow \underline{\hspace{1cm}} \infty$

10. $p(x) = -x^3 + x^2 + 6x$



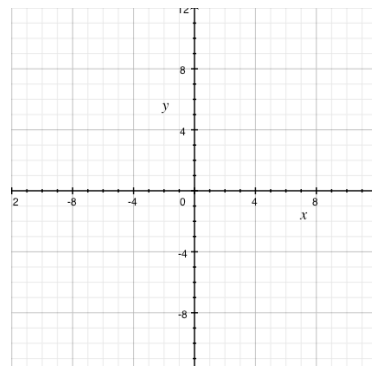
As $x \rightarrow \infty, f(x) \rightarrow \underline{\hspace{1cm}} \infty$ and
 as $x \rightarrow -\infty, f(x) \rightarrow \underline{\hspace{1cm}} \infty$

11. $p(x) = x^4 - 2x^3 - 3x^2 + 8x - 4$



As $x \rightarrow \infty, f(x) \rightarrow \underline{\hspace{1cm}} \infty$ and
 as $x \rightarrow -\infty, f(x) \rightarrow \underline{\hspace{1cm}} \infty$

12. $p(x) = x^4 - 4x^2 + 3$



As $x \rightarrow \infty, f(x) \rightarrow \underline{\hspace{1cm}} \infty$ and
 as $x \rightarrow -\infty, f(x) \rightarrow \underline{\hspace{1cm}} \infty$