

1.6 Polynomial Functions and End Behavior

AP Precalculus

Name: _____

Describe the end behavior of each function using limit notation.

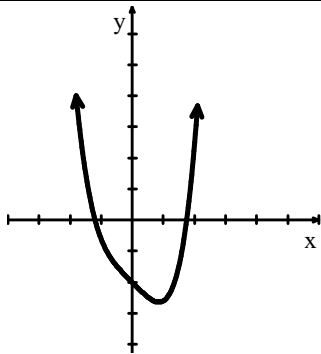
1. $g(x) = -5x^7 + 6x^2$

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

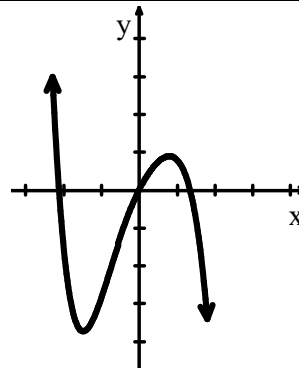
3. $f(x) = 3x^6 - x^3 + 2x$

4. $f(x) = 6x^5 - 3x^2 - 7$

5.

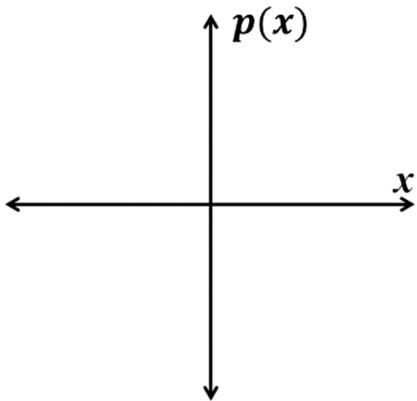


6.

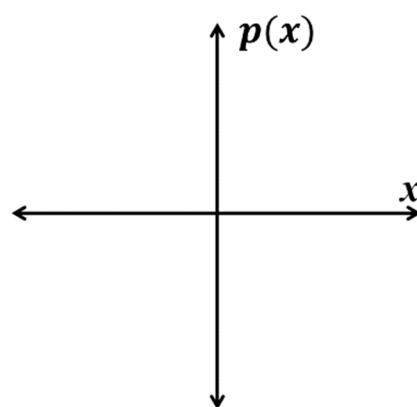


Sketch the graph of a polynomial function that could match each statement.

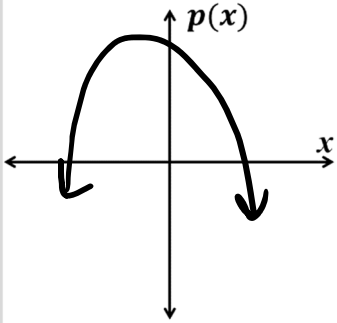
7. $\lim_{x \rightarrow -\infty} p(x) = -\infty$ and $\lim_{x \rightarrow \infty} p(x) = -\infty$



8. $\lim_{x \rightarrow -\infty} p(x) = -\infty$ and $\lim_{x \rightarrow \infty} p(x) = \infty$



Answers to 1.6 CA #1

1. $\lim_{x \rightarrow -\infty} g(x) = \infty$ and $\lim_{x \rightarrow \infty} g(x) = -\infty$	2. $\lim_{x \rightarrow -\infty} p(x) = -\infty$ and $\lim_{x \rightarrow \infty} p(x) = -\infty$
3. $\lim_{x \rightarrow -\infty} f(x) = \infty$ and $\lim_{x \rightarrow \infty} f(x) = \infty$	4. $\lim_{x \rightarrow -\infty} f(x) = -\infty$ and $\lim_{x \rightarrow \infty} f(x) = \infty$
5. $\lim_{x \rightarrow -\infty} p(x) = \infty$ and $\lim_{x \rightarrow \infty} p(x) = \infty$	6. $\lim_{x \rightarrow -\infty} p(x) = \infty$ and $\lim_{x \rightarrow \infty} p(x) = -\infty$
7. 	8. 