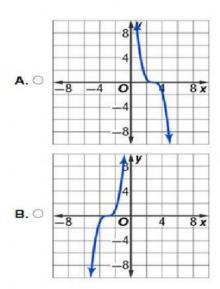
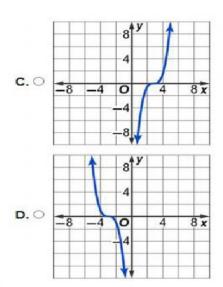
1. Use a graphing calculator to write a polynomial function to model the set of data.

Х	-2	-1	Q	1	2	3
f(x)	-0.5	0.6	1	2	3.5	4

- A. 0.9x 1.3
- **B.** 1.3x 0.9
- C. 0 0.9x + 1.3
- **D.** \bigcirc **1**.3x + 0.9

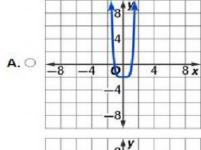
2. Graph
$$f(x) = (x + 3)^3$$



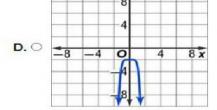


- **5.** Describe the end behavior of $f(x) = -3x^2 + 5x^3 + 2x$ using limits. Explain your reasoning using the leading term test.
 - **A.** \bigcirc Because the degree is even and the leading coefficient is positive, $\lim_{x\to\infty} f(x) = \infty$ and $\lim_{x\to\infty} f(x) = \infty$.
 - **B.** \bigcirc Because the degree is odd and the leading coefficient is negative, $\lim_{x\to\infty} f(x) = \infty$ and $\lim_{x\to\infty} f(x) = -\infty$.
 - **C.** \bigcirc Because the degree is odd and the leading coefficient is positive, $\lim_{x\to -\infty} f(x) = -\infty$ and $\lim_{x\to -\infty} f(x) = \infty$.
 - **D.** O Because the degree is even and the leading coefficient is negative, $\lim_{x\to\infty} f(x) = -\infty$ and $\lim_{x\to\infty} f(x) = -\infty$.

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



- B. O = 8 -4 0 4 8 x
- C. O = 8 -4 O 4 8 x -4 -8



4. Graph $f(x) = -2(x-4)^5 + 1$

