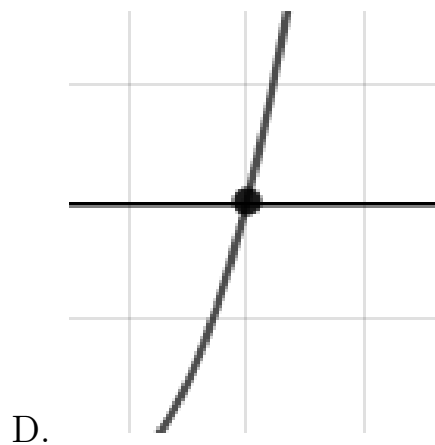
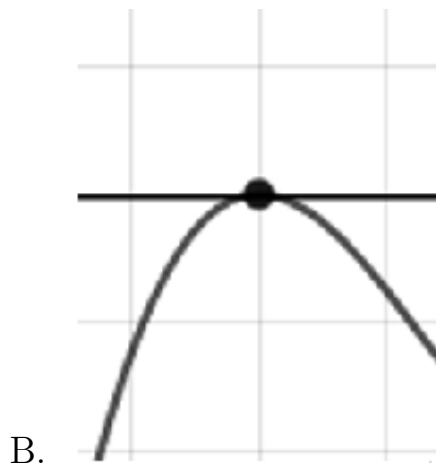
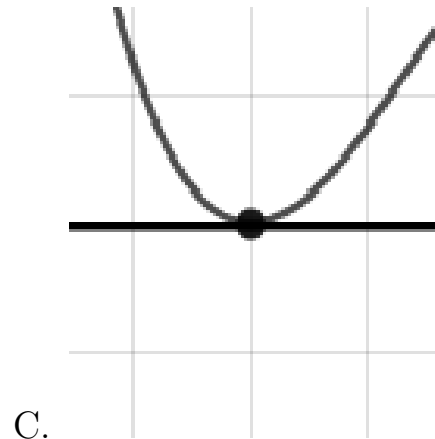
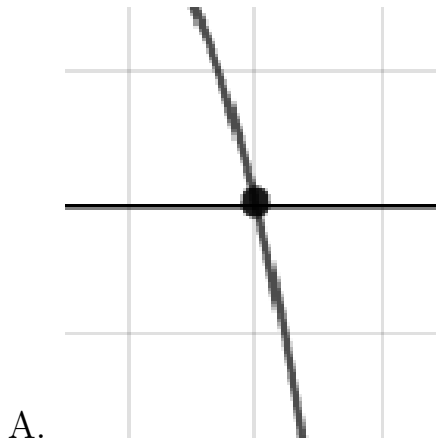


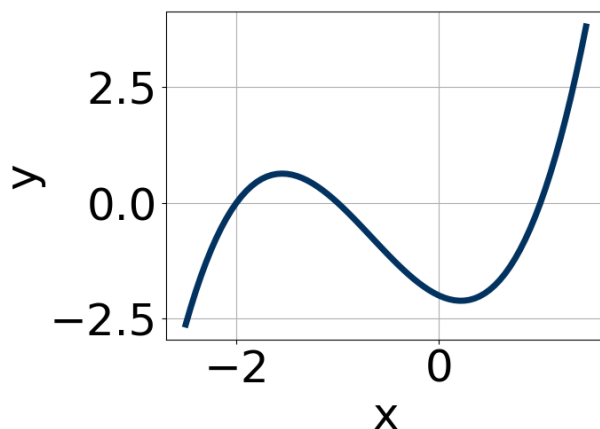
1. Describe the zero behavior of the zero $x = -8$ of the polynomial below.

$$f(x) = 7(x - 5)^7(x + 5)^5(x + 8)^{14}(x - 8)^9$$



E. None of the above.

-
2. Which of the following equations *could* be of the graph presented below?

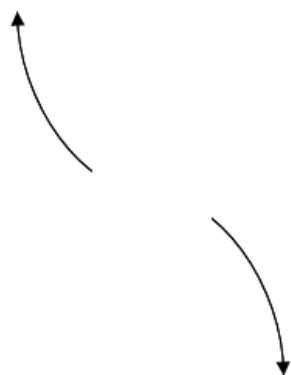


- A. $-2(x+1)^9(x-1)^9(x+2)^5$
 B. $10(x+1)^{10}(x-1)^4(x+2)^5$
 C. $15(x+1)^{10}(x-1)^7(x+2)^5$
 D. $-8(x+1)^{10}(x-1)^{11}(x+2)^9$
 E. $14(x+1)^5(x-1)^5(x+2)^5$

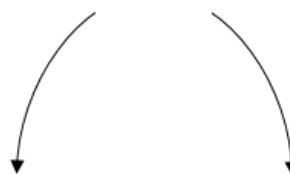
3. Describe the end behavior of the polynomial below.

$$f(x) = -9(x-8)^2(x+8)^7(x-5)^2(x+5)^2$$

A.

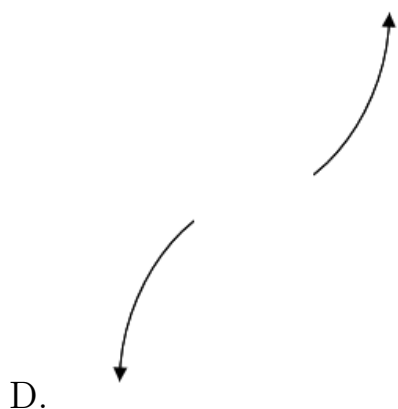


B.



C.





D.

E. None of the above.

4. Construct the lowest-degree polynomial given the zeros below. Then, choose the intervals that contain the coefficients of the polynomial in the form $ax^3 + bx^2 + cx + d$.

$$3, \frac{7}{4}, \text{ and } \frac{-3}{2}$$

- A. $a \in [-2, 10], b \in [24, 30], c \in [-21, -7],$ and $d \in [-69, -61]$
 B. $a \in [-2, 10], b \in [37, 52], c \in [94, 102],$ and $d \in [62, 64]$
 C. $a \in [-2, 10], b \in [21, 24], c \in [-28, -25],$ and $d \in [-69, -61]$
 D. $a \in [-2, 10], b \in [-31, -20], c \in [-21, -7],$ and $d \in [-69, -61]$
 E. $a \in [-2, 10], b \in [-31, -20], c \in [-21, -7],$ and $d \in [62, 64]$

5. Construct the lowest-degree polynomial given the zeros below. Then, choose the intervals that contain the coefficients of the polynomial in the form $x^3 + bx^2 + cx + d$.

$$-3 + 4i \text{ and } -1$$

- A. $b \in [5, 13], c \in [26, 32],$ and $d \in [18, 31]$
 B. $b \in [-1, 4], c \in [-9, -2],$ and $d \in [-7, 0]$

C. $b \in [-9, -5]$, $c \in [26, 32]$, and $d \in [-33, -20]$

D. $b \in [-1, 4]$, $c \in [1, 9]$, and $d \in [-1, 6]$

E. None of the above.
