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

$$-5 + 2i \text{ and } -3$$

A. $b \in [-2, 2], c \in [-2, 3],$ and $d \in [-7, -5]$

B. $b \in [10, 18], c \in [52, 65],$ and $d \in [82, 88]$

C. $b \in [-18, -10], c \in [52, 65],$ and $d \in [-91, -86]$

D. $b \in [-2, 2], c \in [3, 10],$ and $d \in [7, 18]$

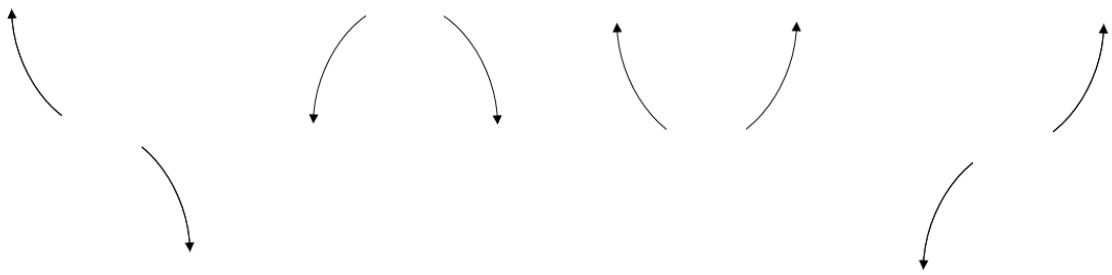
E. None of the above.

---

27. Describe the end behavior of the polynomial below.

$$f(x) = 4(x-8)^3(x-6)^3(x+6)^4(x+8)^4$$

A. B. C. D.



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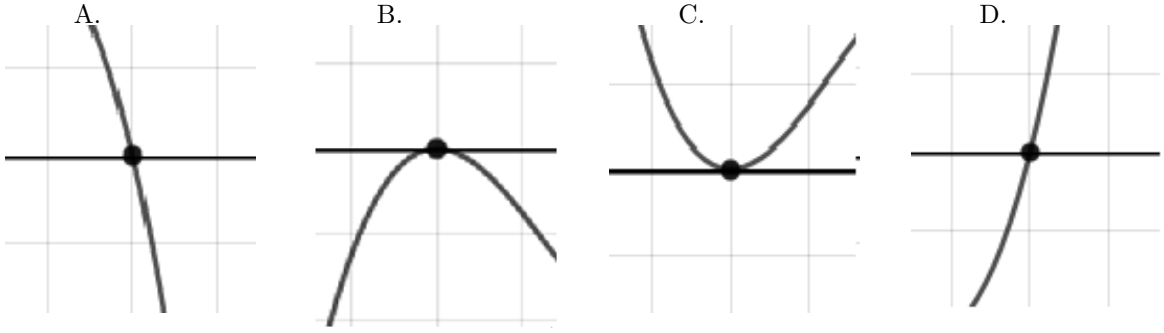
28. Describe the zero behavior of the zero $x = -5$ of the polynomial below.

$$f(x) = -4(x-8)^{10}(x-5)^{12}(x+5)^9(x+8)^7$$

A. B. C. D.



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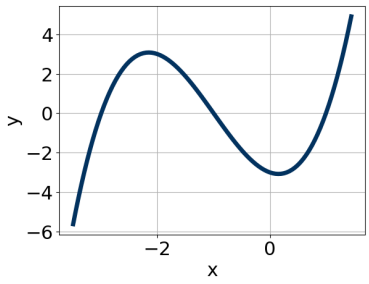
29. Which of the following equations *could* be of the graph presented below?



A. $2(x-1)^7(x+1)^9(x+3)^{11}$

B. $4(x-1)^4(x+1)^{10}(x+3)^7$

C. $-17(x-1)^7(x+1)^9(x+3)^9$

D. $10(x-1)^4(x+1)^{11}(x+3)^5$

E. $-7(x-1)^6(x+1)^7(x+3)^{11}$

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

$$\frac{4}{5}, -7, -6$$

A. $a \in [-6, 10], b \in [-4, 2], c \in [-216, -208],$ and $d \in [-178, -159]$

B. $a \in [-6, 10], b \in [66, 79], c \in [260, 268],$ and $d \in [167, 174]$

C. $a \in [-6, 10], b \in [57, 66], c \in [147, 159],$ and $d \in [167, 174]$

D. $a \in [-6, 10], b \in [-64, -59], c \in [147, 159],$ and $d \in [167, 174]$

E. $a \in [-6, 10], b \in [57, 66], c \in [147, 159],$ and $d \in [-178, -159]$
