

## QUESTIONS

- Which polynomial satisfies all of the following criteria:
  - Degree 4
  - Leading coefficient 2
  - End behaviour: Quadrant II to Quadrant I

A)  $y = -5x^3 + 3x^2 - x$   
B)  $y = 2x^6 + 2x^4 + 4x^2$   
C)  $y = 2x^2 + 4$   
D)  $y = 2x^4 - 5x^3 - 6$
- The maximum number of x-intercepts a quadratic function can have is:

A) 1  
B) 2  
C) 3
- A function extends from Quadrant II to Quadrant I. It has 1 turning point and y-intercept of  $y = 5$ . Which of the following functions could satisfy this criteria?

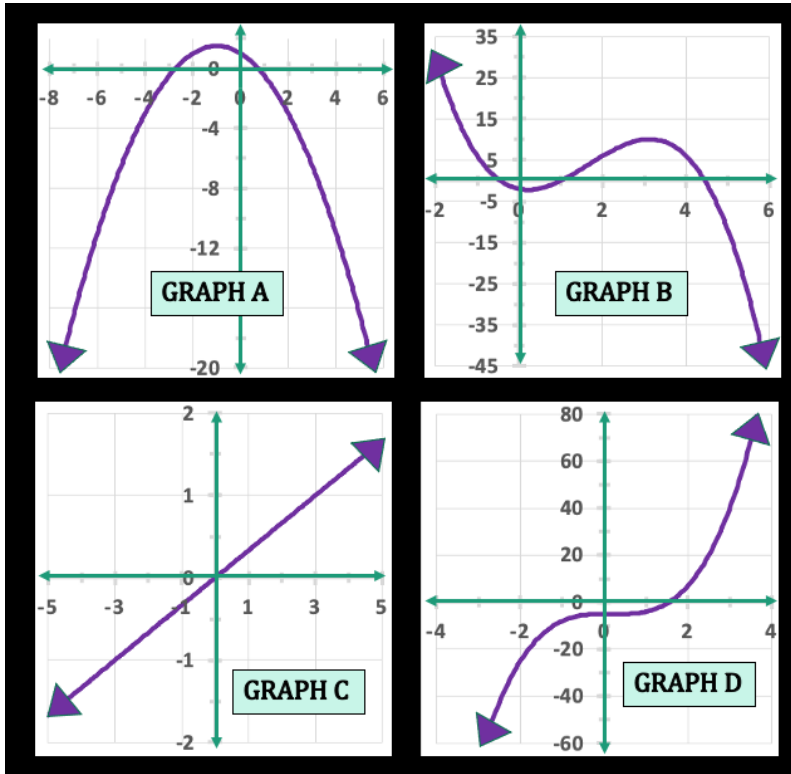
A)  $f(x) = -x^3 + 5$   
B)  $f(x) = -x^2 + 5$   
C)  $f(x) = x - 5$   
D)  $f(x) = x^2 + 5$
- What is the range of the function:  $g(x) = 3x + 6$ 

A)  $\{y \in R\}$   
B)  $\{y \geq 6\}$   
C)  $\{y \leq 6\}$   
D)  $\{y \geq 2\}$
- If an ODD function is multiplied by an EVEN function, the result will be:

A. An odd function  
B. An even function  
C. A function that is neither even or odd



Use the following graphs to answer the next five questions:



6. Which of the graphs show the polynomial:  $f(x) = -\frac{1}{2}x^2 - x + 1$ ?
- Graph A
  - Graph B
  - Graph C
  - Graph D
7. How many turning points are there in the function shown in Graph B?
- 0
  - 1
  - 2
  - 3



8. Which of the graphs show the polynomial:  $g(x) = \frac{1}{3}x$ ?
- A. Graph A
  - B. Graph B
  - C. Graph C
  - D. Graph D
9. Which of the graphs shows a polynomial with end behaviour going from Quadrant II to Quadrant IV?
- A. Graph A
  - B. Graph B
  - C. Graph C
  - D. Graph D
10. Is the leading coefficient of the polynomial shown in Graph B positive or negative?
- A. Positive
  - B. Negative



**ANSWERS:**

1. D

2. B

3. D

4. A

5. A

6. A

7. C

8. C

9. B

10. B

