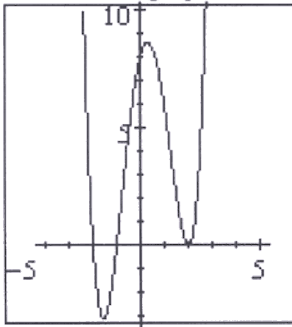


MCB FINAL REVIEW

Multiple Choice

Identify the letter of the choice that best completes the statement or answers the question.

Refer to the graph. Which statement is false?



- the degree equals the number of turning points
 - the first coefficient is positive
 - the degree is even
 - it has a minimum value
- The value of an automobile decreases exponentially by 25% each year. About how much will a \$35 000 car be worth in 9 years?
 - \$1335
 - \$0
 - \$3500
 - \$2630
 - In the formula for sound loudness, $L = 10 \log \frac{I}{I_0}$, the symbol I_0 represents:
 - original sound intensity
 - a barely audible sound intensity
 - a barely audible sound loudness
 - an intensity of 1 W/m²
 - Find the derivative of $h(x) = (5x)(7x^2)$.
 - $35x^3$
 - $12x^3$
 - $105x^2$
 - $2x^3$
 - Which of the following limits is undefined?
 - $\lim_{x \rightarrow 1} \frac{x^2 - 1}{x - 1}$
 - $\lim_{x \rightarrow 3} \frac{x + 3}{x^2 - 9}$
 - $\lim_{x \rightarrow -2} \frac{x^2 + 4x + 4}{x + 2}$
 - $\lim_{x \rightarrow -4} \frac{4x + x^2}{x + 4}$
 - What is the derivative of $f(x) = \frac{x - 1}{x + 3}$?
 - $f'(x) = 1$
 - $f'(x) = \frac{4}{x^2 + 9}$
 - $f'(x) = \frac{4}{x + 3}$
 - $f'(x) = \frac{-}{x + 3}$
 - Let $g(x) = (2x^3 - 5x^2 + 3x)^4$. Determine $g'(x)$ at $x = 2$.
 - 27
 - 32
 - 224
 - 1372
 - Two snowmobiles approach the same intersection, one travelling north-east and the other travelling north-west. The distance d , in kilometres, between them is given by $d(t) = \sqrt{(2 - 40t)^2 + (3 - 50t)^2}$, where t is the time in hours. In how many minutes will the distance between them be shortest if they maintain a constant speed?
 - 0.06 min
 - 6 min
 - 3.4 min
 - 3.0 min