ALBERTA MATH 31 · UNIT 3 · 5 QUESTIONS

Applications of Derivatives — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **The function $f(x) = 3x^2 - 12$ is increasing on the interval**

- A $(-\infty, 0)$
- B $(0, \infty)$
- C $(-2, 2)$
- D all real numbers

Understand It with Pulse | Flag a mistake

2 **The graph of a function f is shown. The minimum value of the function f is**

- A 3
- B 7
- C -2
- D 4

Understand It with Pulse | Flag a mistake

3 **A race car has position $s(t) = 5t^2 - 2t + 1$ metres at time t seconds. The acceleration of the particle is**



A $10t - 2\ m/s^2$

B $20t\ m/s^2$

C $10\ m/s^2$

D $0\ m/s^2$

Understand It with Pulse | Flag a mistake

4 **The positive critical number of the function $f(x) = x^3 - 27x$ is _____**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **The graph of $f(x) = x^3$ is concave down on the interval**

A (0, ∞)

B every interval

C no interval

D (-∞, 0)

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. B
2. A
3. C
4. 3
5. D

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