Applications of Derivatives — Practice Test

Newfoundland and Labrador Mathematics 3208 • 10 questions

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 **If $s(t) = 4t^2$, then the velocity at time 3 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **If $f(x) = x^2 - 6x + 8$, then the minimum value is**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **If $f(x) = -x^2 + 4x + 1$, then the maximum value is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **A rectangle has perimeter 60 metres. Its maximum area is, in m^2**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **If $s(t) = t^2 - 6t$, then the velocity at time 2 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

6 **If $s(t) = 3t^2$, then the acceleration is**

ANSWER _____

Understand It with Pulse | Flag a mistake

7 **A circle has radius 2 units increasing at 3 units per second. The rate of change of its area is, in units^2 per second, to two decimal places**

ANSWER _____

Understand It with Pulse | Flag a mistake

8 **A cube has side length 2 units increasing at 3 units per second. The rate of change of its volume is, in units³ per second**

ANSWER _____

Understand It with Pulse | Flag a mistake

9 **If $C(x) = x^2 + 5x$, then $C'(10)$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

10 **If $f'(x) = 2x - 6$, then f is decreasing when**

A $x < 3$

B $x > 3$

C $x = 3$

D $x < 0$

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	24	**5.**	-2	**9.**	25
2.	-1	**6.**	6	**10.**	A
3.	5	**7.**	37.68		
4.	225	**8.**	36		

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