PRINCE EDWARD ISLAND CALCULUS 12 · UNIT C

Applications of Derivatives — Practice Test

Prince Edward Island Calculus 12 • 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 **The slope of the tangent to $y = x^2$ at $x = 4$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **A function decreases on an interval where its derivative is**

A. positive

B. zero

C. undefined

D. negative

Understand It with Pulse | Flag a mistake

3 **A function increases on an interval where its derivative is**

A positive

B negative

C zero

D undefined

Understand It with Pulse | Flag a mistake

4 **A local maximum of a differentiable function occurs at a point where the derivative**

A changes from positive to negative

B changes from negative to positive

C is always positive

D is undefined only

Understand It with Pulse | Flag a mistake

5 **For position $s = t^2$ metres , the velocity at time $t = 6$ seconds in metres per second is**

ANSWER

Understand It with Pulse | Flag a mistake

6 **The minimum value of $x^2 + 4$ is**

ANSWER

Understand It with Pulse | Flag a mistake

7 **The minimum value of $x^2 - 6x + 10$ is**

ANSWER

Understand It with Pulse | Flag a mistake

8 **Velocity is the derivative of**

- **A** force with respect to time
- **B** position with respect to time
- **C** acceleration with respect to time
- **D** time with respect to position

Understand It with Pulse | Flag a mistake

9 **The slope of the tangent to $y = x^2$ at $x = 5$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

10 **The slope of the tangent to $y = x^2 + 5$ at $x = 3$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	8	**5.**	12	**9.**	10
2.	D	**6.**	4	**10.**	6
3.	A	**7.**	1		
4.	A	**8.**	B		

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