Practice worksheet | Introduction to calculus

Derivative notation and the derivative function

Name: _____ Date: _____

6 questions | 18 marks

1. If $f'(x) = 2x + 5$, calculate $f'(-2)$ and interpret it. [3 marks]

2. For $y = 4x^2 - 1$, write the derivative using Leibniz notation. [3 marks]

3. V is in litres and t in minutes. State the units of $\frac{dV}{dt}$. [3 marks]

4. $A = \pi r^2$ and $\frac{dA}{dr} = 2\pi r$, with r in cm. Evaluate the derivative at 3 and give units. [3 marks]

5. For $f(x) = x^2 + 3x$, find $f(1)$ and $f'(1)$. [3 marks]

6. A student writes $f'(2) = f(2)^2$. Explain the error. [3 marks]