4. Given the function $f(y) = 2y^2 + 2y$,
the average rate of change from $y=-2$ to $y=5$ is:

9

−8

8

7

Solution

Using the average rate of change formula:

The average rate of change $= \dfrac{f(5) - f(-2)}{5 - (-2)}$

$= \dfrac{(2(5)^2 + 2(5)) - (2(-2)^2 + 2(-2))}{7}$

$= \dfrac{60 - 4}{7}$

$= 8$