6. Given the function $c(x) = 2x^2 + 4x$,
the average rate of change from $x=2$ to $x=6$ is:

21

−20

20

19

Solution

Using the average rate of change formula:

The average rate of change $= \frac{c(6) - c(2)}{6 - 2}$

$$= \frac{(2(6)^2 + 4(6)) - (2(2)^2 + 4(2))}{4}$$

$$= \frac{96 - 16}{4}$$

$$= 20$$