

7. Given the function  $r(y) = 2y^2 + 2y$ ,  
the average rate of change from  $y=3$  to  $y=6$  is:

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-20

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### Solution

Using the average rate of change formula:

$$\text{The average rate of change} = \frac{r(6) - r(3)}{6 - 3}$$

$$= \frac{(2(6)^2 + 2(6)) - (2(3)^2 + 2(3))}{3}$$

$$= \frac{84 - 24}{3}$$

$$= 20$$