5. Which of the following are correct calculations for difference quotient of:

$y(j) = 9j^2 + 7j + 6$

$y(j) = 9j^2 + 7j + 6$

$y(j+h) = 9(h+j)^2 + 7(h+j) + 6$

$= 9h^2 + 18hj + 7h + 9j^2 + 7j + 6$

$\frac{y(j+h) - y(j)}{h} = \frac{\left(9h^2 + 18jh + 7h + 9j^2 + 7j + 6\right) - \left(9(j+1)^2 + 7(j+1) + 6\right)}{h}$

$= \frac{9h^2 + 18jh + 7h}{h}$

$= \frac{h(9h + 18j + 7)}{h}$

$= 9h + 18j + 7$

$y(j) = 9j^2 + 7j + 6$

$y(j+h) = 9(h+j)^2 + 7(h+j) + 6$

$= 9h^2 + 18hj + 25h + 9j^2 + 25j + 22$

$\frac{y(j+h) - y(j)}{h} = \frac{\left(9h^2 + 18jh + 25h + 9j^2 + 25j + 22\right) - \left(9j^2 + 7j + 6\right)}{h}$

$= \frac{9h^2 + 18jh + 7h}{h}$

$= \frac{h(9h + 18j + 7)}{h}$

$= 9h + 18j + 7$

$y(j) = 9j^2 + 7j + 6$

$y(j+h) = 9(h+j)^2 + 7(h+j) + 6$

$= 9h^2 + 18hj + 7h + 9j^2 + 7j + 6$

$\frac{y(j+h) - y(j)}{h} = \frac{\left(9h^2 + 18jh + 7h + 9j^2 + 7j + 6\right) - \left(9j^2 + 7j + 6\right)}{h}$

$= \frac{9h^2 + 18jh + 7h}{h}$

$= \frac{h(9h + 18j + 7)}{h}$

$= 9h + 18j + 7$

$y(j) = 9j^2 + 7j + 6$

$y(j+h) = 9(h+j)^2 + 7(h+j) + 6$

$= 9h^2 + 18hj - 11h + 9j^2 - 11j + 8$

$\frac{y(j+h) - y(j)}{h} = \frac{\left(9h^2 + 18jh + 43h + 9j^2 + 43j + 56\right) - \left(9j^2 + 7j + 6\right)}{h}$

$= \frac{9h^2 + 18jh + 7h}{h}$

$= \frac{h(9h + 18(j+1) + 7)}{h}$

$= 9h + 18j + 7$

Solution