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

$b(q) = 9q^2 + 3q + 7$

$b(q) = 9q^2 + 3q + 7$

$b(q+h) = 9(h+q)^2 + 3(h+q) + 7$

$= 9h^2 + 18hq + 3h + 9q^2 + 3q + 7$

$$\frac{b(q+h)-b(q)}{h} = \frac{\left(9h^2+18qh+3h+9q^2+3q+7\right)-\left(9(q+1)^2+3(q+1)+7\right)}{h}$$

$$= \frac{9h^2+18qh+3h}{h}$$

$$= \frac{h(9h+18q+3)}{h}$$

$= 9h + 18q + 3$

$b(q) = 9q^2 + 3q + 7$

$b(q+h) = 9(h+q)^2 + 3(h+q) + 7$

$= 9h^2 + 18hq + 21h + 9q^2 + 21q + 19$

$$\frac{b(q+h)-b(q)}{h} = \frac{\left(9h^2+18qh+21h+9q^2+21q+19\right)-\left(9q^2+3q+7\right)}{h}$$

$$= \frac{9h^2+18qh+3h}{h}$$

$$= \frac{h(9h+18q+3)}{h}$$

$= 9h + 18q + 3$

$b(q) = 9q^2 + 3q + 7$

$b(q+h) = 9(h+q)^2 + 3(h+q) + 7$

$= 9h^2 + 18hq + 3h + 9q^2 + 3q + 7$

$$\frac{b(q+h)-b(q)}{h} = \frac{\left(9h^2+18qh+3h+9q^2+3q+7\right)-\left(9q^2+3q+7\right)}{h}$$

$$= \frac{9h^2+18qh+3h}{h}$$

$$= \frac{h(9h+18q+3)}{h}$$

$= 9h + 18q + 3$

$b(q) = 9q^2 + 3q + 7$

$b(q+h) = 9(h+q)^2 + 3(h+q) + 7$

$= 9h^2 + 18hq - 15h + 9q^2 - 15q + 13$

$$\frac{b(q+h)-b(q)}{h} = \frac{\left(9h^2+18qh+39h+9q^2+39q+49\right)-\left(9q^2+3q+7\right)}{h}$$

$$= \frac{9h^2+18qh+3h}{h}$$

$$= \frac{h(9h+18(q+1)+3)}{h}$$

$= 9h + 18q + 3$

Solution