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

$w(t) = 3t^2 + 9t + 8$

$w(t) = 3t^2 + 9t + 8$

$w(t+h) = 3(h+t)^2 + 9(h+t) + 8$

$= 3h^2 + 6ht + 9h + 3t^2 + 9t + 8$

$$\frac{w(t+h) - w(t)}{h} = \frac{\left(3h^2+6th+9h+3t^2+9t+8\right) - \left(3(t+1)^2+9(t+1)+8\right)}{h}$$

$$= \frac{3h^2+6th+9h}{h}$$

$$= \frac{h(3h+6t+9)}{h}$$

$= 3h + 6t + 9$

$w(t) = 3t^2 + 9t + 8$

$w(t+h) = 3(h+t)^2 + 9(h+t) + 8$

$= 3h^2 + 6ht + 15h + 3t^2 + 15t + 20$

$$\frac{w(t+h) - w(t)}{h} = \frac{\left(3h^2+6th+15h+3t^2+15t+20\right) - \left(3t^2+9t+8\right)}{h}$$

$$= \frac{3h^2+6th+9h}{h}$$

$$= \frac{h(3h+6t+9)}{h}$$

$= 3h + 6t + 9$

$w(t) = 3t^2 + 9t + 8$

$w(t+h) = 3(h+t)^2 + 9(h+t) + 8$

$= 3h^2 + 6ht + 9h + 3t^2 + 9t + 8$

$$\frac{w(t+h) - w(t)}{h} = \frac{\left(3h^2+6th+9h+3t^2+9t+8\right) - \left(3t^2+9t+8\right)}{h}$$

$$= \frac{3h^2+6th+9h}{h}$$

$$= \frac{h(3h+6t+9)}{h}$$

$= 3h + 6t + 9$

$w(t) = 3t^2 + 9t + 8$

$w(t+h) = 3(h+t)^2 + 9(h+t) + 8$

$= 3h^2 + 6ht + 3h + 3t^2 + 3t + 2$

$$\frac{w(t+h) - w(t)}{h} = \frac{\left(3h^2+6th+21h+3t^2+21t+38\right) - \left(3t^2+9t+8\right)}{h}$$

$$= \frac{3h^2+6th+9h}{h}$$

$$= \frac{h(3h+6(t+1)+9)}{h}$$

$= 3h + 6t + 9$

Solution