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

$r(w) = 9w^2 + 4w + 9$

$r(w) = 9w^2 + 4w + 9$

$r(w+h) = 9(h+w)^2 + 4(h+w) + 9$

$= 9h^2 + 18hw + 4h + 9w^2 + 4w + 9$

$\dfrac{r(w+h) - r(w)}{h} = \dfrac{\left(9h^2 + 18wh + 4h + 9w^2 + 4w + 9\right) - \left(9(w+1)^2 + 4(w+1) + 9\right)}{h}$

$= \dfrac{9h^2 + 18wh + 4h}{h}$

$= \dfrac{h(9h + 18w + 4)}{h}$

$= 9h + 18w + 4$

$r(w) = 9w^2 + 4w + 9$

$r(w+h) = 9(h+w)^2 + 4(h+w) + 9$

$= 9h^2 + 18hw + 22h + 9w^2 + 22w + 22$

$\dfrac{r(w+h) - r(w)}{h} = \dfrac{\left(9h^2 + 18wh + 22h + 9w^2 + 22w + 22\right) - \left(9w^2 + 4w + 9\right)}{h}$

$= \dfrac{9h^2 + 18wh + 4h}{h}$

$= \dfrac{h(9h + 18w + 4)}{h}$

$= 9h + 18w + 4$

$r(w) = 9w^2 + 4w + 9$

$r(w+h) = 9(h+w)^2 + 4(h+w) + 9$

$= 9h^2 + 18hw + 4h + 9w^2 + 4w + 9$

$\dfrac{r(w+h) - r(w)}{h} = \dfrac{\left(9h^2 + 18wh + 4h + 9w^2 + 4w + 9\right) - \left(9w^2 + 4w + 9\right)}{h}$

$= \dfrac{9h^2 + 18wh + 4h}{h}$

$= \dfrac{h(9h + 18w + 4)}{h}$

$= 9h + 18w + 4$

$r(w) = 9w^2 + 4w + 9$

$r(w+h) = 9(h+w)^2 + 4(h+w) + 9$

$= 9h^2 + 18hw - 14h + 9w^2 - 14w + 14$

$\dfrac{r(w+h) - r(w)}{h} = \dfrac{\left(9h^2 + 18wh + 40h + 9w^2 + 40w + 53\right) - \left(9w^2 + 4w + 9\right)}{h}$

$= \dfrac{9h^2 + 18wh + 4h}{h}$

$= \dfrac{h(9h + 18(w+1) + 4)}{h}$

$= 9h + 18w + 4$

Solution