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

$p(g) = 9g^2 + 3g + 9$

$p(g) = 9g^2 + 3g + 9$

$p(g+h) = 9(g+h)^2 + 3(g+h) + 9$

$= 9g^2 + 18gh + 3g + 9h^2 + 3h + 9$

$$\frac{p(g+h)-p(g)}{h} = \frac{\left(9g^2+18hg+3g+9h^2+3h+9\right)-\left(9(g+1)^2+3(g+1)+9\right)}{h}$$

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

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

$= 18g + 9h + 3$

$p(g) = 9g^2 + 3g + 9$

$p(g+h) = 9(g+h)^2 + 3(g+h) + 9$

$= 9g^2 + 18gh + 21g + 9h^2 + 21h + 21$

$$\frac{p(g+h)-p(g)}{h} = \frac{\left(9g^2+18hg+21g+9h^2+21h+21\right)-\left(9g^2+3g+9\right)}{h}$$

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

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

$= 18g + 9h + 3$

$p(g) = 9g^2 + 3g + 9$

$p(g+h) = 9(g+h)^2 + 3(g+h) + 9$

$= 9g^2 + 18gh + 3g + 9h^2 + 3h + 9$

$$\frac{p(g+h)-p(g)}{h} = \frac{\left(9g^2+18hg+3g+9h^2+3h+9\right)-\left(9g^2+3g+9\right)}{h}$$

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

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

$= 18g + 9h + 3$

$p(g) = 9g^2 + 3g + 9$

$p(g+h) = 9(g+h)^2 + 3(g+h) + 9$

$= 9g^2 + 18gh - 15g + 9h^2 - 15h + 15$

$$\frac{p(g+h)-p(g)}{h} = \frac{\left(9g^2+18hg+39g+9h^2+39h+51\right)-\left(9g^2+3g+9\right)}{h}$$

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

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

$= 18g + 9h + 3$

Solution