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

$k(p) = 8p^2 + 3p + 7$

$k(p) = 8p^2 + 3p + 7$

$k(p+h) = 8(h+p)^2 + 3(h+p) + 7$

$= 8h^2 + 16hp + 3h + 8p^2 + 3p + 7$

$$\frac{k(p+h)-k(p)}{h} = \frac{\left(8h^2+16ph+3h+8p^2+3p+7\right)-\left(8(p+1)^2+3(p+1)+7\right)}{h}$$

$$= \frac{8h^2+16ph+3h}{h}$$

$$= \frac{h(8h+16p+3)}{h}$$

$= 8h + 16p + 3$

$k(p) = 8p^2 + 3p + 7$

$k(p+h) = 8(h+p)^2 + 3(h+p) + 7$

$= 8h^2 + 16hp + 19h + 8p^2 + 19p + 18$

$$\frac{k(p+h)-k(p)}{h} = \frac{\left(8h^2+16ph+19h+8p^2+19p+18\right)-\left(8p^2+3p+7\right)}{h}$$

$$= \frac{8h^2+16ph+3h}{h}$$

$$= \frac{h(8h+16p+3)}{h}$$

$= 8h + 16p + 3$

$k(p) = 8p^2 + 3p + 7$

$k(p+h) = 8(h+p)^2 + 3(h+p) + 7$

$= 8h^2 + 16hp + 3h + 8p^2 + 3p + 7$

$$\frac{k(p+h)-k(p)}{h} = \frac{\left(8h^2+16ph+3h+8p^2+3p+7\right)-\left(8p^2+3p+7\right)}{h}$$

$$= \frac{8h^2+16ph+3h}{h}$$

$$= \frac{h(8h+16p+3)}{h}$$

$= 8h + 16p + 3$

$k(p) = 8p^2 + 3p + 7$

$k(p+h) = 8(h+p)^2 + 3(h+p) + 7$

$= 8h^2 + 16hp - 13h + 8p^2 - 13p + 12$

$$\frac{k(p+h)-k(p)}{h} = \frac{\left(8h^2+16ph+35h+8p^2+35p+45\right)-\left(8p^2+3p+7\right)}{h}$$

$$= \frac{8h^2+16ph+3h}{h}$$

$$= \frac{h(8h+16(p+1)+3)}{h}$$

$= 8h + 16p + 3$

Solution