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

$$m(s) = 2s^2 + 3s + 7$$

$$m(s) = 2s^2 + 3s + 7$$

$$m(s+h) = 2(h+s)^2 + 3(h+s) + 7$$

$$= 2h^2 + 4hs + 3h + 2s^2 + 3s + 7$$

$$\frac{m(s+h) - m(s)}{h} = \frac{\left(2h^2 + 4sh + 3h + 2s^2 + 3s + 7\right) - \left(2(s+1)^2 + 3(s+1) + 7\right)}{h}$$

$$= \frac{2h^2 + 4sh + 3h}{h}$$

$$= \frac{h(2h + 4s + 3)}{h}$$

$$= 2h + 4s + 3$$

$$m(s) = 2s^2 + 3s + 7$$

$$m(s+h) = 2(h+s)^2 + 3(h+s) + 7$$

$$= 2h^2 + 4hs + 7h + 2s^2 + 7s + 12$$

$$\frac{m(s+h) - m(s)}{h} = \frac{\left(2h^2 + 4sh + 7h + 2s^2 + 7s + 12\right) - \left(2s^2 + 3s + 7\right)}{h}$$

$$= \frac{2h^2 + 4sh + 3h}{h}$$

$$= \frac{h(2h + 4s + 3)}{h}$$

$$= 2h + 4s + 3$$

$$m(s) = 2s^2 + 3s + 7$$

$$m(s+h) = 2(h+s)^2 + 3(h+s) + 7$$

$$= 2h^2 + 4hs + 3h + 2s^2 + 3s + 7$$

$$\frac{m(s+h) - m(s)}{h} = \frac{\left(2h^2 + 4sh + 3h + 2s^2 + 3s + 7\right) - \left(2s^2 + 3s + 7\right)}{h}$$

$$= \frac{2h^2 + 4sh + 3h}{h}$$

$$= \frac{h(2h + 4s + 3)}{h}$$

$$= 2h + 4s + 3$$

$$m(s) = 2s^2 + 3s + 7$$

$$m(s+h) = 2(h+s)^2 + 3(h+s) + 7$$

$$= 2h^2 + 4hs - h + 2s^2 - s + 6$$

$$\frac{m(s+h) - m(s)}{h} = \frac{\left(2h^2 + 4sh + 11h + 2s^2 + 11s + 21\right) - \left(2s^2 + 3s + 7\right)}{h}$$

$$= \frac{2h^2 + 4sh + 3h}{h}$$

$$= \frac{h(2h + 4(s+1) + 3)}{h}$$

$$= 2h + 4s + 3$$

Solution