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

$r(m) = 2m^2 + 3m + 6$

$r(m) = 2m^2 + 3m + 6$

$r(m+h) = 2(h+m)^2 + 3(h+m) + 6$

$= 2h^2 + 4hm + 3h + 2m^2 + 3m + 6$

$$\frac{r(m+h) - r(m)}{h} = \frac{\left(2h^2+4mh+3h+2m^2+3m+6\right) - \left(2(m+1)^2+3(m+1)+6\right)}{h}$$

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

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

$= 2h + 4m + 3$

$r(m) = 2m^2 + 3m + 6$

$r(m+h) = 2(h+m)^2 + 3(h+m) + 6$

$= 2h^2 + 4hm + 7h + 2m^2 + 7m + 11$

$$\frac{r(m+h) - r(m)}{h} = \frac{\left(2h^2+4mh+7h+2m^2+7m+11\right) - \left(2m^2+3m+6\right)}{h}$$

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

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

$= 2h + 4m + 3$

$r(m) = 2m^2 + 3m + 6$

$r(m+h) = 2(h+m)^2 + 3(h+m) + 6$

$= 2h^2 + 4hm + 3h + 2m^2 + 3m + 6$

$$\frac{r(m+h) - r(m)}{h} = \frac{\left(2h^2+4mh+3h+2m^2+3m+6\right) - \left(2m^2+3m+6\right)}{h}$$

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

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

$= 2h + 4m + 3$

$r(m) = 2m^2 + 3m + 6$

$r(m+h) = 2(h+m)^2 + 3(h+m) + 6$

$= 2h^2 + 4hm - h + 2m^2 - m + 5$

$$\frac{r(m+h) - r(m)}{h} = \frac{\left(2h^2+4mh+11h+2m^2+11m+20\right) - \left(2m^2+3m+6\right)}{h}$$

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

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

$= 2h + 4m + 3$

Solution