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

$r(a) = 8a^2 + 4a + 5$

$r(a) = 8a^2 + 4a + 5$

$r(a+h) = 8(a+h)^2 + 4(a+h) + 5$

$= 8a^2 + 16ah + 4a + 8h^2 + 4h + 5$

$$\frac{r(a+h)-r(a)}{h} = \frac{\left(8a^2+16ha+4a+8h^2+4h+5\right)-\left(8(a+1)^2+4(a+1)+5\right)}{h}$$

$$= \frac{8h^2+16ah+4h}{h}$$

$$= \frac{h(16a+8h+4)}{h}$$

$= 16a + 8h + 4$

$r(a) = 8a^2 + 4a + 5$

$r(a+h) = 8(a+h)^2 + 4(a+h) + 5$

$= 8a^2 + 16ah + 20a + 8h^2 + 20h + 17$

$$\frac{r(a+h)-r(a)}{h} = \frac{\left(8a^2+16ha+20a+8h^2+20h+17\right)-\left(8a^2+4a+5\right)}{h}$$

$$= \frac{8h^2+16ah+4h}{h}$$

$$= \frac{h(16a+8h+4)}{h}$$

$= 16a + 8h + 4$

$r(a) = 8a^2 + 4a + 5$

$r(a+h) = 8(a+h)^2 + 4(a+h) + 5$

$= 8a^2 + 16ah + 4a + 8h^2 + 4h + 5$

$$\frac{r(a+h)-r(a)}{h} = \frac{\left(8a^2+16ha+4a+8h^2+4h+5\right)-\left(8a^2+4a+5\right)}{h}$$

$$= \frac{8h^2+16ah+4h}{h}$$

$$= \frac{h(16a+8h+4)}{h}$$

$= 16a + 8h + 4$

$r(a) = 8a^2 + 4a + 5$

$r(a+h) = 8(a+h)^2 + 4(a+h) + 5$

$= 8a^2 + 16ah - 12a + 8h^2 - 12h + 9$

$$\frac{r(a+h)-r(a)}{h} = \frac{\left(8a^2+16ha+36a+8h^2+36h+45\right)-\left(8a^2+4a+5\right)}{h}$$

$$= \frac{8h^2+16ah+4h}{h}$$

$$= \frac{h(16(a+1)+8h+4)}{h}$$

$= 16a + 8h + 4$

Solution