

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

$$a(v) = 9v^2 + 8v + 7$$

$$a(v) = 9v^2 + 8v + 7$$

$$a(v+h) = 9(h+v)^2 + 8(h+v) + 7$$

$$= 9h^2 + 18hv + 8h + 9v^2 + 8v + 7$$

$$\frac{a(v+h) - a(v)}{h} = \frac{(9h^2 + 18vh + 8h + 9v^2 + 8v + 7) - (9v^2 + 8v + 7)}{h}$$

$$= \frac{9h^2 + 18vh + 8h}{h}$$

$$= \frac{h(9h + 18v + 8)}{h}$$

$$= 9h + 18v + 8$$

$$a(v) = 9v^2 + 8v + 7$$

$$a(v+h) = 9(h+v)^2 + 8(h+v) + 7$$

$$= 9h^2 + 18hv + 26h + 9v^2 + 26v + 24$$

$$\frac{a(v+h) - a(v)}{h} = \frac{(9h^2 + 18vh + 26h + 9v^2 + 26v + 24) - (9v^2 + 8v + 7)}{h}$$

$$= \frac{9h^2 + 18vh + 8h}{h}$$

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$$a(v) = 9v^2 + 8v + 7$$

$$a(v+h) = 9(h+v)^2 + 8(h+v) + 7$$

$$= 9h^2 + 18hv - 10h + 9v^2 - 10v + 8$$

$$\frac{a(v+h) - a(v)}{h} = \frac{(9h^2 + 18vh + 44h + 9v^2 + 44v + 59) - (9v^2 + 8v + 7)}{h}$$

$$= \frac{9h^2 + 18vh + 8h}{h}$$

$$= \frac{h(9h + 18(v+1) + 8)}{h}$$

$$= 9h + 18v + 8$$

**Solution**