

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

$$m(a) = 5a^2 + 6a + 7$$

$$m(a) = 5a^2 + 6a + 7$$

$$m(a+h) = 5(a+h)^2 + 6(a+h) + 7$$

$$= 5a^2 + 10ah + 6a + 5h^2 + 6h + 7$$

$$\frac{m(a+h) - m(a)}{h} = \frac{(5a^2 + 10ah + 6a + 5h^2 + 6h + 7) - (5a^2 + 6a + 7)}{h}$$

$$= \frac{5h^2 + 10ah + 6h}{h}$$

$$= \frac{h(10a + 5h + 6)}{h}$$

$$= 10a + 5h + 6$$

$$m(a) = 5a^2 + 6a + 7$$

$$m(a+h) = 5(a+h)^2 + 6(a+h) + 7$$

$$= 5a^2 + 10ah + 16a + 5h^2 + 16h + 18$$

$$\frac{m(a+h) - m(a)}{h} = \frac{(5a^2 + 10ah + 16a + 5h^2 + 16h + 18) - (5a^2 + 6a + 7)}{h}$$

$$= \frac{5h^2 + 10ah + 6h}{h}$$

$$= \frac{h(10a + 5h + 6)}{h}$$

$$= 10a + 5h + 6$$

$$m(a) = 5a^2 + 6a + 7$$

$$m(a+h) = 5(a+h)^2 + 6(a+h) + 7$$

$$= 5a^2 + 10ah + 6a + 5h^2 + 6h + 7$$

$$\frac{m(a+h) - m(a)}{h} = \frac{(5a^2 + 10ah + 6a + 5h^2 + 6h + 7) - (5a^2 + 6a + 7)}{h}$$

$$= \frac{5h^2 + 10ah + 6h}{h}$$

$$= \frac{h(10a + 5h + 6)}{h}$$

$$= 10a + 5h + 6$$

$$m(a) = 5a^2 + 6a + 7$$

$$m(a+h) = 5(a+h)^2 + 6(a+h) + 7$$

$$= 5a^2 + 10ah - 4a + 5h^2 - 4h + 6$$

$$\frac{m(a+h) - m(a)}{h} = \frac{(5a^2 + 10ah + 26a + 5h^2 + 26h + 39) - (5a^2 + 6a + 7)}{h}$$

$$= \frac{5h^2 + 10ah + 6h}{h}$$

$$= \frac{h(10(a+1) + 5h + 6)}{h}$$

$$= 10a + 5h + 6$$

Solution