

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

$$m(b) = 5b^2 + 4b + 5$$

$$m(b) = 5b^2 + 4b + 5$$

$$m(b+h) = 5(b+h)^2 + 4(b+h) + 5$$

$$= 5b^2 + 10bh + 4b + 5h^2 + 4h + 5$$

$$\frac{m(b+h) - m(b)}{h} = \frac{(5b^2 + 10bh + 4b + 5h^2 + 4h + 5) - (5(b+1)^2 + 4(b+1) + 5)}{h}$$

$$= \frac{5h^2 + 10bh + 4h}{h}$$

$$= \frac{h(10b + 5h + 4)}{h}$$

$$= 10b + 5h + 4$$

$$m(b) = 5b^2 + 4b + 5$$

$$m(b+h) = 5(b+h)^2 + 4(b+h) + 5$$

$$= 5b^2 + 10bh + 14b + 5h^2 + 14h + 14$$

$$\frac{m(b+h) - m(b)}{h} = \frac{(5b^2 + 10bh + 14b + 5h^2 + 14h + 14) - (5b^2 + 4b + 5)}{h}$$

$$= \frac{5h^2 + 10bh + 4h}{h}$$

$$= \frac{h(10b + 5h + 4)}{h}$$

$$= 10b + 5h + 4$$

$$m(b) = 5b^2 + 4b + 5$$

$$m(b+h) = 5(b+h)^2 + 4(b+h) + 5$$

$$= 5b^2 + 10bh + 4b + 5h^2 + 4h + 5$$

$$\frac{m(b+h) - m(b)}{h} = \frac{(5b^2 + 10bh + 4b + 5h^2 + 4h + 5) - (5b^2 + 4b + 5)}{h}$$

$$= \frac{5h^2 + 10bh + 4h}{h}$$

$$= \frac{h(10b + 5h + 4)}{h}$$

$$= 10b + 5h + 4$$

$$m(b) = 5b^2 + 4b + 5$$

$$m(b+h) = 5(b+h)^2 + 4(b+h) + 5$$

$$= 5b^2 + 10bh - 6b + 5h^2 - 6h + 6$$

$$\frac{m(b+h) - m(b)}{h} = \frac{(5b^2 + 10bh + 24b + 5h^2 + 24h + 33) - (5b^2 + 4b + 5)}{h}$$

$$= \frac{5h^2 + 10bh + 4h}{h}$$

$$= \frac{h(10(b+1) + 5h + 4)}{h}$$

$$= 10b + 5h + 4$$

Solution