

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

$$f(x) = 4x + 4$$

$$f(x) = 4x + 4$$

$$f(x+h) = 4(h+x) + 4$$

$$= 4h + 4x + 4$$

$$\frac{f(x+h) - f(x)}{h} = \frac{(4h + 4x + 4) - (4(x+1) + 4)}{h}$$

$$= \frac{4h}{h}$$

$$= \frac{h(4)}{h}$$

$$= 4$$

$$f(x) = 4x + 4$$

$$f(x+h) = 4(h+x) + 4$$

$$= 4h + 4x + 8$$

$$\frac{f(x+h) - f(x)}{h} = \frac{(4h + 4x + 8) - (4x + 4)}{h}$$

$$= \frac{4h}{h}$$

$$= \frac{h(4)}{h}$$

$$= 4$$

$$f(x) = 4x + 4$$

$$f(x+h) = 4(h+x) + 4$$

$$= 4h + 4x + 4$$

$$\frac{f(x+h) - f(x)}{h} = \frac{(4h + 4x + 4) - (4x + 4)}{h}$$

$$= \frac{4h}{h}$$

$$= \frac{h(4)}{h}$$

$$= 4$$

$$f(x) = 4x + 4$$

$$f(x+h) = 4(h+x) + 4$$

$$= 4h + 4x$$

$$\frac{f(x+h) - f(x)}{h} = \frac{(4h + 4x + 12) - (4x + 4)}{h}$$

$$= \frac{4h}{h}$$

$$= \frac{h(4)}{h}$$

$$= 4$$

**Solution**