

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

$$u(n) = 9n + 8$$

$$u(n) = 9n + 8$$

$$u(n+h) = 9(h+n) + 8$$

$$= 9h + 9n + 8$$

$$\frac{u(n+h) - u(n)}{h} = \frac{(9h + 9n + 8) - (9(n+1) + 8)}{h}$$

$$= \frac{9h}{h}$$

$$= \frac{h(9)}{h}$$

$$= 9$$

$$u(n) = 9n + 8$$

$$u(n+h) = 9(h+n) + 8$$

$$= 9h + 9n + 17$$

$$\frac{u(n+h) - u(n)}{h} = \frac{(9h + 9n + 17) - (9n + 8)}{h}$$

$$= \frac{9h}{h}$$

$$= \frac{h(9)}{h}$$

$$= 9$$

$$u(n) = 9n + 8$$

$$u(n+h) = 9(h+n) + 8$$

$$= 9h + 9n + 8$$

$$\frac{u(n+h) - u(n)}{h} = \frac{(9h + 9n + 8) - (9n + 8)}{h}$$

$$= \frac{9h}{h}$$

$$= \frac{h(9)}{h}$$

$$= 9$$

$$u(n) = 9n + 8$$

$$u(n+h) = 9(h+n) + 8$$

$$= 9h + 9n - 1$$

$$\frac{u(n+h) - u(n)}{h} = \frac{(9h + 9n + 26) - (9n + 8)}{h}$$

$$= \frac{9h}{h}$$

$$= \frac{h(9)}{h}$$

$$= 9$$

Solution