4. Which of the following are correct calculations for difference quotient of: $u(t) = 5 \ t + 7$ $u(t) = 5 \ t + 7$ $u(t+h) = 5 \ (h+t) + 7$ $= 5 \ h + 5 \ t + 7$

$$\begin{array}{l} u \, (t+h) = 5 \, (h+t) \, + 7 \\ = 5 \, h + 5 \, t + 7 \\ \frac{u \, (t+h) - u \, (t)}{h} = \frac{(5 \, h + 5 \, t + 7) - (5 \, (t+1) + 7)}{h} \\ = \frac{5 \, h}{h} \\ = \frac{h \, (5)}{h} \\ = 5 \\ \\ u \, (t) = 5 \, t + 7 \\ u \, (t+h) = 5 \, (h+t) \, + 7 \\ \end{array}$$

$$\begin{array}{c} u (t+h) = 5 & (h+t) + 7 \\ = 5 & h + 5 & t + 12 \\ \frac{u(t+h) - u(t)}{h} = \frac{(5 & h + 5 & t + 12) - (5 & t + 7)}{h} \\ = \frac{5 & h}{h} \\ = \frac{h(5)}{h} \\ = 5 \end{array}$$

$$\begin{array}{c} u\,(\,t+h)\,=\,5\,\,(\,h\,+\,t\,)\,\,+\,7\\ =\,5\,\,h\,+\,5\,\,t\,+\,7\\ \frac{u\,(\,t+h)\,-\,u\,(\,t\,)}{h}\,=\,\frac{(\,5\,\,h+\,5\,\,t+\,7\,)\,-\,(\,5\,\,t+\,7\,)}{h}\\ =\,\frac{\,5\,\,h}{h}\\ =\,\frac{\,h\,(\,5\,)}{h}\\ =\,5 \\ \\ \end{array}$$

$\begin{array}{l} u \ (t) = 5 \ t + 7 \\ u \ (t+h) = 5 \ (h+t) + 7 \\ = 5 \ h + 5 \ t + 2 \\ \frac{u \ (t+h) - u \ (t)}{h} = \frac{(5 \ h + 5 \ t + 17) - (5 \ t + 7)}{h} \\ = \frac{5 \ h}{h} \\ = \frac{h \ (5)}{h} \\ = 5 \end{array}$

Solution