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

$c(t) = 8t^2 + 2t + 6$

$c(t) = 8t^2 + 2t + 6$

$c(t+h) = 8(h+t)^2 + 2(h+t) + 6$

$= 8h^2 + 16ht + 2h + 8t^2 + 2t + 6$

$\frac{c(t+h)-c(t)}{h} = \frac{\left(8h^2+16th+2h+8t^2+2t+6\right)-\left(8(t+1)^2+2(t+1)+6\right)}{h}$

$= \frac{8h^2+16th+2h}{h}$

$= \frac{h(8h+16t+2)}{h}$

$= 8h + 16t + 2$

$c(t) = 8t^2 + 2t + 6$

$c(t+h) = 8(h+t)^2 + 2(h+t) + 6$

$= 8h^2 + 16ht + 18h + 8t^2 + 18t + 16$

$\frac{c(t+h)-c(t)}{h} = \frac{\left(8h^2+16th+18h+8t^2+18t+16\right)-\left(8t^2+2t+6\right)}{h}$

$= \frac{8h^2+16th+2h}{h}$

$= \frac{h(8h+16t+2)}{h}$

$= 8h + 16t + 2$

$c(t) = 8t^2 + 2t + 6$

$c(t+h) = 8(h+t)^2 + 2(h+t) + 6$

$= 8h^2 + 16ht + 2h + 8t^2 + 2t + 6$

$\frac{c(t+h)-c(t)}{h} = \frac{\left(8h^2+16th+2h+8t^2+2t+6\right)-\left(8t^2+2t+6\right)}{h}$

$= \frac{8h^2+16th+2h}{h}$

$= \frac{h(8h+16t+2)}{h}$

$= 8h + 16t + 2$

$c(t) = 8t^2 + 2t + 6$

$c(t+h) = 8(h+t)^2 + 2(h+t) + 6$

$= 8h^2 + 16ht - 14h + 8t^2 - 14t + 12$

$\frac{c(t+h)-c(t)}{h} = \frac{\left(8h^2+16th+34h+8t^2+34t+42\right)-\left(8t^2+2t+6\right)}{h}$

$= \frac{8h^2+16th+2h}{h}$

$= \frac{h(8h+16(t+1)+2)}{h}$

$= 8h + 16t + 2$

Solution