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

$t(d) = 7d^2 + 3d + 7$

$t(d) = 7d^2 + 3d + 7$

$t(d+h) = 7(d+h)^2 + 3(d+h) + 7$

$= 7d^2 + 14dh + 3d + 7h^2 + 3h + 7$

$\dfrac{t(d+h) - t(d)}{h} = \dfrac{\left(7d^2 + 14hd + 3d + 7h^2 + 3h + 7\right) - \left(7(d+1)^2 + 3(d+1) + 7\right)}{h}$

$= \dfrac{7h^2 + 14dh + 3h}{h}$

$= \dfrac{h(14d + 7h + 3)}{h}$

$= 14d + 7h + 3$

$t(d) = 7d^2 + 3d + 7$

$t(d+h) = 7(d+h)^2 + 3(d+h) + 7$

$= 7d^2 + 14dh + 17d + 7h^2 + 17h + 17$

$\dfrac{t(d+h) - t(d)}{h} = \dfrac{\left(7d^2 + 14hd + 17d + 7h^2 + 17h + 17\right) - \left(7d^2 + 3d + 7\right)}{h}$

$= \dfrac{7h^2 + 14dh + 3h}{h}$

$= \dfrac{h(14d + 7h + 3)}{h}$

$= 14d + 7h + 3$

$t(d) = 7d^2 + 3d + 7$

$t(d+h) = 7(d+h)^2 + 3(d+h) + 7$

$= 7d^2 + 14dh + 3d + 7h^2 + 3h + 7$

$\dfrac{t(d+h) - t(d)}{h} = \dfrac{\left(7d^2 + 14hd + 3d + 7h^2 + 3h + 7\right) - \left(7d^2 + 3d + 7\right)}{h}$

$= \dfrac{7h^2 + 14dh + 3h}{h}$

$= \dfrac{h(14d + 7h + 3)}{h}$

$= 14d + 7h + 3$

$t(d) = 7d^2 + 3d + 7$

$t(d+h) = 7(d+h)^2 + 3(d+h) + 7$

$= 7d^2 + 14dh - 11d + 7h^2 - 11h + 11$

$\dfrac{t(d+h) - t(d)}{h} = \dfrac{\left(7d^2 + 14hd + 31d + 7h^2 + 31h + 41\right) - \left(7d^2 + 3d + 7\right)}{h}$

$= \dfrac{7h^2 + 14dh + 3h}{h}$

$= \dfrac{h(14(d+1) + 7h + 3)}{h}$

$= 14d + 7h + 3$

Solution