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

$y(n) = 6n + 6$

$y(n) = 6n + 6$

$y(n+h) = 6(h + n) + 6$

$= 6h + 6n + 6$

$\frac{y(n+h) - y(n)}{h} = \frac{(6h + 6n + 6) - (6(n+1) + 6)}{h}$

$= \frac{6h}{h}$

$= \frac{h(6)}{h}$

$= 6$

$y(n) = 6n + 6$

$y(n+h) = 6(h + n) + 6$

$= 6h + 6n + 12$

$\frac{y(n+h) - y(n)}{h} = \frac{(6h + 6n + 12) - (6n + 6)}{h}$

$= \frac{6h}{h}$

$= \frac{h(6)}{h}$

$= 6$

$y(n) = 6n + 6$

$y(n+h) = 6(h + n) + 6$

$= 6h + 6n + 6$

$\frac{y(n+h) - y(n)}{h} = \frac{(6h + 6n + 6) - (6n + 6)}{h}$

$= \frac{6h}{h}$

$= \frac{h(6)}{h}$

$= 6$

$y(n) = 6n + 6$

$y(n+h) = 6(h + n) + 6$

$= 6h + 6n$

$\frac{y(n+h) - y(n)}{h} = \frac{(6h + 6n + 18) - (6n + 6)}{h}$

$= \frac{6h}{h}$

$= \frac{h(6)}{h}$

$= 6$

Solution