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

$u(k) = k + 8$

$u(k) = k + 8$

$u(k+h) = h + k + 8$

$= h + k + 8$

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

$= \frac{h}{h}$

$= \frac{h(1)}{h}$

$= 1$

$u(k) = k + 8$

$u(k+h) = h + k + 8$

$= h + k + 9$

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

$= \frac{h}{h}$

$= \frac{h(1)}{h}$

$= 1$

$u(k) = k + 8$

$u(k+h) = h + k + 8$

$= h + k + 8$

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

$= \frac{h}{h}$

$= \frac{h(1)}{h}$

$= 1$

$u(k) = k + 8$

$u(k+h) = h + k + 8$

$= h + k + 7$

$\frac{u(k+h) - u(k)}{h} = \frac{(h+k+10) - (k+8)}{h}$

$= \frac{h}{h}$

$= \frac{h(1)}{h}$

$= 1$

Solution