3. Which of the following are correct calculations for difference quotient of:  $c\left(g\right)=4\;g+5$ 

$$\begin{array}{c} c \ (g) = 4 \ g + 5 \\ c \ (g+h) = 4 \ (g+h) + 5 \\ = 4 \ g + 4 \ h + 5 \\ \frac{c \ (g+h) - c \ (g)}{h} = \frac{(4 \ g + 4 \ h + 5) - (4 \ (g+1) + 5)}{h} \\ = \frac{4 \ h}{h} \\ = \frac{h \ (4)}{h} \\ = 4 \\ \hline \end{array}$$

$$\frac{c(g+h)-c(g)}{h} = \frac{(4g+4h+9)-(4g+5)}{h}$$

$$= \frac{4h}{h}$$

$$= \frac{h(4)}{h}$$

$$= 4$$

$$c(g) = 4g+5$$

$$c(g+h) = 4(g+h)+5$$

$$= 4g+4h+5$$

 $\frac{c\,(g\!+\!h)-c\,(g)}{\cdot} = \frac{(4\,g\!+\!4\,h\!+\!5)-(4\,g\!+\!5)}{\cdot}$ 

c(g+h) = 4(g+h) + 5

=4 g + 4 h + 9

$$\begin{array}{c} c\;(g) = 4\;g + 5\\ c\;(g + h) = 4\;(g + h) + 5\\ = 4\;g + 4\;h + 1\\ \frac{c\;(g + h) - c\;(g)}{h} = \frac{(4\;g + 4\;h + 13) - (4\;g + 5)}{h}\\ = \frac{4\;h}{h}\\ = \frac{h\;(4)}{h}\\ = 4 \end{array}$$

## Solution

 $= \frac{4 \text{ h}}{\text{h}}$ 

 $=\frac{h\left(4\right)}{h}$ 

=4