4. Which of the following are correct calculations for difference quotient of: $p(q) = 3 \ q + 5$ $p(q) = 3 \ q + 5$ $p(q+h) = 3 \ (h+q) + 5$ $= 3 \ h + 3 \ q + 5$

```
\begin{aligned} &\frac{p(q+h)-p(q)}{h} = \frac{(3\,h+3\,q+5)-(3\,(q+1)+5)}{h} \\ &= \frac{3\,h}{h} \\ &= \frac{h\,(3)}{h} \\ &= 3 \end{aligned} = 3 \begin{aligned} &p\,(q) = 3\,q + 5 \\ &p\,(q+h) = 3\,(h+q) + 5 \\ &= 3\,h + 3\,q + 8 \\ &\frac{p\,(q+h)-p\,(q)}{h} = \frac{(3\,h+3\,q+8)-(3\,q+5)}{h} \end{aligned}
```

```
p(q) = 3 q + 5
p(q+h) = 3 (h + q) + 5
= 3 h + 3 q + 5
\frac{p(q+h) - p(q)}{h} = \frac{(3 h+3 q+5) - (3 q+5)}{h}
= \frac{3 h}{h}
= \frac{h(3)}{h}
= 3
```

```
p(q) = 3 q + 5
p(q+h) = 3 (h + q) + 5
= 3 h + 3 q + 2
\frac{p(q+h) - p(q)}{h} = \frac{(3 h+3 q+11) - (3 q+5)}{h}
= \frac{3 h}{h}
= \frac{h(3)}{h}
= 3
```

Solution

 $=\frac{3 \text{ h}}{\text{h}}$

 $=\frac{h(3)}{1}$

=3