$\begin{array}{l} v\left(m\right) = m^2 + 5 \; m + 8 \\ \\ v\left(m + h\right) = \left(h + m\right)^2 + 5 \; \left(h + m\right) \; + 8 \\ \\ = h^2 + 2 \; h \; m + 5 \; h + m^2 + 5 \; m + 8 \\ \\ \frac{v\left(m + h\right) - v\left(m\right)}{h} = \frac{\left(h^2 + 2 \; m \; h + 5 \; h + m^2 + 5 \; m + 8\right) - \left(\; \left(m + 1\right)^2 + 5 \; \left(m + 1\right) + 8\right)}{h} \\ \\ = \frac{h^2 + 2 \; m \; h + 5 \; h}{h} \\ \\ = \frac{h \; (h + 2 \; m + 5)}{h} \end{array}$

7. Which of the following are correct calculations for

```
\begin{split} &v\left(m\right)=m^{2}+5\ m+8\\ &v\left(m+h\right)=\left(h+m\right)^{2}+5\ \left(h+m\right)+8\\ &=h^{2}+2\ h\ m+7\ h+m^{2}+7\ m+14\\ &\frac{v\left(m+h\right)-v\left(m\right)}{h}=\frac{\left(h^{2}+2\ m\ h+7\ h+m^{2}+7\ m+14\right)-\left(m^{2}+5\ m+8\right)}{h}\\ &=\frac{h^{2}+2\ m\ h+5\ h}{h}\\ &=\frac{h\left(h+2\ m+5\right)}{h}\\ &=h+2\ m+5 \end{split}
```

difference quotient of:

= h + 2 m + 5

 $v(m) = m^2 + 5 m + 8$

```
 = h^{2} + 2 h m + 5 h + m^{2} + 5 m + 8 
\frac{v (m+h) - v (m)}{h} = \frac{\left(h^{2} + 2 m h + 5 h + m^{2} + 5 m + 8\right) - \left(m^{2} + 5 m + 8\right)}{h} 
= \frac{h^{2} + 2 m h + 5 h}{h} 
= \frac{h (h+2 m+5)}{h} 
= h + 2 m + 5 
V (m) = m^{2} + 5 m + 8 
V (m+h) = (h + m)^{2} + 5 (h + m) + 8 
= h^{2} + 2 h m + 3 h + m^{2} + 3 m + 4
```

 $\left(\,h^{2} + 2\,\,\text{m}\,\,h + 9\,\,h + m^{2} + 9\,\,\text{m} + 22\,\right) - \left(\,m^{2} + 5\,\,\text{m} + 8\,\right)$

 $v(m+h) = (h + m)^2 + 5 (h + m) + 8$

$= \frac{h^2 + 2 m h + 5 h}{h}$ $= \frac{h (h+2 (m+1) + 5)}{h}$ = h + 2 m + 5

Solution