```
5. Which of the following are correct calculations for difference quotient of: n(j) = 7 j^2 + 6 j + 2 n(j) = 7 j^2 + 6 j + 2 n(j+h) = 7 (h+j)^2 + 6 (h+j) + 2 = 7 h^2 + 14 h j + 6 h + 7 j^2 + 6 j + 2
```

```
\begin{split} &\frac{n\,(j+h)\,-n\,(j)}{h} = \frac{\left(7\,h^2+14\,j\,h+6\,h+7\,j^2+6\,j+2\right)-\left(7\,\left(j+1\right)^2+6\,\left(j+1\right)+2\right)}{h} \\ &= \frac{7\,h^2+14\,j\,h+6\,h}{h} \\ &= \frac{h\,(7\,h+14\,j+6)}{h} \\ &= 7\,h+14\,j+6 \end{split}
&= 7\,h+14\,j+6 \end{split}
&= 7\,h+14\,j+6 
&= 7\,h^2+14\,h\,j+20\,h+7\,j^2+20\,j+15 
&= \frac{7\,h^2+14\,j\,h+6\,h}{h} = \frac{\left(7\,h^2+14\,j\,h+20\,h+7\,j^2+20\,j+15\right)-\left(7\,j^2+6\,j+2\right)}{h} \\ &= \frac{7\,h^2+14\,j\,h+6\,h}{h} \end{split}
```

```
\begin{split} &n\,(\,j\,)=7\,\,j^{\,2}\,+\,6\,\,j\,+\,2\\ &n\,(\,j\,+\,h)=7\,\,\left(\,h\,+\,j\,\right)^{\,2}\,+\,6\,\,\left(\,h\,+\,j\,\right)\,+\,2\\ &=7\,\,h^{\,2}\,+\,14\,\,h\,\,j\,+\,6\,\,h\,+\,7\,\,j^{\,2}\,+\,6\,\,j\,+\,2\\ &\frac{n\,(\,j\,+\,h)\,-\,n\,(\,j\,)}{h}=\frac{\left(\,7\,\,h^{\,2}\,+\,14\,\,j\,\,h\,+\,6\,\,h\,+\,7\,\,j^{\,2}\,+\,6\,\,j\,+\,2\,\right)\,-\,\left(\,7\,\,j^{\,2}\,+\,6\,\,j\,+\,2\,\right)}{h}\\ &=\frac{7\,\,h^{\,2}\,+\,14\,\,j\,\,h\,+\,6\,\,h}{h}\\ &=\frac{h\,(\,7\,\,h\,+\,14\,\,j\,+\,6\,\,h}{h}\\ &=7\,\,h\,+\,14\,\,j\,+\,6\,\end{split}
```

```
\begin{split} &n\left(j\right)=7\ j^2+6\ j+2\\ &n\left(j+h\right)=7\ \left(h+j\right)^2+6\ \left(h+j\right)+2\\ &=7\ h^2+14\ h\ j-8\ h+7\ j^2-8\ j+3\\ &\frac{n\left(j+h\right)-n\left(j\right)}{h}=\frac{\left(7\ h^2+14\ j\ h+34\ h+7\ j^2+34\ j+42\right)-\left(7\ j^2+6\ j+2\right)}{h}\\ &=\frac{7\ h^2+14\ j\ h+6\ h}{h}\\ &=\frac{h\left(7\ h+14\ \left(j+1\right)+6\right)}{h}\\ &=7\ h+14\ j+6 \end{split}
```

Solution

 $=\frac{h(7 h+14 j+6)}{}$

=7 h + 14 j + 6