7. Which of the following are correct calculations for difference quotient of: v(z) = 7z + 6 v(z) = 7z + 6 v(z) = 7z + 6

```
 \begin{array}{c} v\left(z+h\right) = 7 \; \left(h+z\right) \; + 6 \\ = 7 \; h + 7 \; z + 6 \\ \frac{v\left(z+h\right) - v\left(z\right)}{h} = \frac{(7 \; h + 7 \; z + 6) - (7 \; (z+1) + 6)}{h} \\ = \frac{7 \; h}{h} \\ = \frac{h \; (7)}{h} \\ = 7 \\ \hline \\ v\left(z+h\right) = 7 \; z + 6 \\ v\left(z+h\right) = 7 \; (h+z) \; + 6 \\ \end{array}
```

```
\begin{array}{c} v(z) = 7z + 0 \\ v(z+h) = 7(h+z) + 6 \\ = 7h + 7z + 13 \\ \frac{v(z+h) - v(z)}{h} = \frac{(7h+7z+13) - (7z+6)}{h} \\ = \frac{7h}{h} \\ = \frac{h(7)}{h} \\ = 7 \end{array}
```

```
\begin{array}{c} v\left(z\right) = 7 \ z + 6 \\ v\left(z + h\right) = 7 \ \left(h + z\right) + 6 \\ = 7 \ h + 7 \ z + 6 \\ \frac{v\left(z + h\right) - v\left(z\right)}{h} = \frac{(7 \ h + 7 \ z + 6) - (7 \ z + 6)}{h} \\ = \frac{7 \ h}{h} \\ = \frac{h \left(7\right)}{h} \\ = 7 \end{array}
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\begin{array}{c} v\left(z\right) = 7 \ z + 6 \\ v\left(z + h\right) = 7 \ \left(h + z\right) + 6 \\ = 7 \ h + 7 \ z - 1 \\ \frac{v\left(z + h\right) - v\left(z\right)}{h} = \frac{(7 \ h + 7 \ z + 20) - (7 \ z + 6)}{h} \\ = \frac{7 \ h}{h} \\ = \frac{h \ (7)}{h} \\ = 7 \end{array}
```

## Solution