2. Which of the following are correct calculations for difference quotient of: $p\left(y\right)=y+1$ $p\left(y\right)=y+1$ $p\left(y+h\right)=h+y+1$ =h+y+1

```
\begin{split} \frac{p(y+h)-p(y)}{h} &= \frac{(h+y+1)-(y+2)}{h} \\ &= \frac{h}{h} \\ &= \frac{h(1)}{h} \\ &= 1 \end{split}
\begin{split} p(y) &= y+1 \\ p(y+h) &= h+y+1 \\ &= h+y+2 \\ \frac{p(y+h)-p(y)}{h} &= \frac{(h+y+2)-(y+1)}{h} \\ &= \frac{h}{h} \\ &= \frac{h(1)}{h} \end{split}
```

=1

```
 \begin{array}{c} p\left(y\right) = y + 1 \\ p\left(y + h\right) = h + y + 1 \\ = h + y + 1 \\ \frac{p\left(y + h\right) - p\left(y\right)}{h} = \frac{(h + y + 1) - (y + 1)}{h} \\ = \frac{h}{h} \\ = \frac{h\left(1\right)}{h} \\ = 1 \end{array}
```

```
 p(y) = y + 1 
 p(y+h) = h + y + 1 
 = h + y 
 \frac{p(y+h) - p(y)}{h} = \frac{(h+y+3) - (y+1)}{h} 
 = \frac{h}{h} 
 = \frac{h(1)}{h} 
 = 1
```

Solution