

Five positive consecutive integers starting with a have average b . What is the average of five consecutive integers that start with b ?

We have

$$\frac{a + (a+1) + (a+2) + (a+3) + (a+4)}{5} = b$$

$$\Rightarrow \frac{5a + 10}{5} = b$$

$$\Rightarrow a + 2 = b$$

$$\begin{aligned} \text{So } & \frac{b + (b+1) + (b+2) + (b+3) + (b+4)}{5} \\ &= \frac{(a+2) + (a+3) + (a+4) + (a+5) + (a+6)}{5} \\ &= \frac{5a + 20}{5} \end{aligned}$$

$\boxed{a+4}$ is the average of the five numbers starting at b