

The mean of a set of 5 different positive integers is 15. The median is 18. What is the max possible value for the largest of the integers?

$$\boxed{a} \quad \boxed{b} \quad 18 \quad \boxed{c} \quad \boxed{d}$$

$\underbrace{\hspace{1.5cm}}_{15+3}$

$$\frac{a+b+(18)+c+d}{5} = 15$$

$$\Rightarrow a+b+18+c+d = 75 \Rightarrow a+b+c+d = 57$$

$$a, b < 18. \quad c, d > 18$$

To maximise d , we minimise the other 3 numbers. Choose

$$a = 1$$

$$b = 2$$

$$c = 19$$

$$\Rightarrow 1+2+19+d = 57$$

$$\Rightarrow 22+d = 57$$

$$\Rightarrow d = 35$$