November 11th

If

$ax = by = cz = 5$ and $\frac{1}{x} + \frac{1}{y} + \frac{1}{z} = 4$

What is a + b + c?

Corbett maths

*If* $ax = 5$ *then*

$x = \frac{5}{a}$

$\frac{1}{x} = \frac{a}{5}$

*and similarly*

$\frac{1}{y} = \frac{b}{5}$ *and* $\frac{1}{z} = \frac{c}{5}$

*Hence* $\frac{a}{5} + \frac{b}{5} + \frac{c}{5} = 4$

*Giving*

$$\boldsymbol{a + b + c = 20}$$