Divide 184 into two parts such that one-third of one part may exceed one-seventh of the other part by 8.

ANSWER:

Let the two parts be x and $(184 - x)$.

Then, we have:

$\frac{1}{3}x = \frac{1}{7}(184 - \mathrm{x}) + 8$

$\Rightarrow \frac{1}{3}x - \frac{1}{7}(184 - \mathrm{x}) = 8$

$\Rightarrow \frac{1}{3}x - \frac{184}{7} + \frac{x}{7} = 8$

$\Rightarrow \frac{1}{3}x + \frac{1}{7}x = \frac{184}{7} + 8$

$\Rightarrow \frac{7x+3x}{21} = 8 + \frac{184}{7}$

$\Rightarrow \frac{10x}{21} = \frac{56+184}{7}$

$\Rightarrow \frac{10x}{21} = \frac{240}{7}$

$\Rightarrow x = \frac{240 \times 21}{7 \times 10}$

$= 72$

Now, other part $= 184 - 72 = 112$

$\therefore$ The two parts are 72 and 112.