Exercise 14F

Question 5:

We prepare the following frequency table :

(X_i)	(f_i)	f_iX_i
3	6	18
5	8	40
7	15	105
9	P	9P
11	8	88
13	4	52
	$\Sigma f_i = 41 + P$	$\Sigma f_i x_i = 303 + 9p$

$$\text{Mean} = \frac{\Sigma f_i x_i}{\Sigma f_i} = \frac{303 + 9P}{41 + P}$$

But mean = 8 (given)

$$\therefore \quad \frac{303+9P}{41+p} = 8$$

$\Rightarrow 303 + 9p = 8(41+p)$

$\Rightarrow 303 + 9p = 328 + 8p$

$\Rightarrow 9p - 8p = 328 - 303$

$\Rightarrow P=25$

$\therefore$ the value of P=25

********** END **********