We can organize information in a table.

Let x represent the number of students present in the class on Tuesday.

	Absent	Present
Tue:	$\frac{1}{13}x$	x
Wed:	$\frac{1}{13}x-1$	$x+1$

$$\frac{1}{13}x-1=\frac{1}{20}(x+1)$$

$$\frac{x}{13}-1=\frac{x}{20}+\frac{1}{20}$$

$$\frac{x}{13}-\frac{x}{20}=1+\frac{1}{20}$$

$$\frac{20x}{260}-\frac{13x}{260}=\frac{20}{20}+\frac{1}{20}$$

$$\frac{7x}{260}=\frac{21}{20} \longrightarrow 7x=\frac{(21)(260)}{20}$$

$$7x=(21)(13),\quad x=\frac{\cancel{(21)}^{3}(13)}{\cancel{7}_{1}},\quad x=39$$

The total number of students in class is $\frac{1}{13}x+x=\frac{39}{13}+39$

$=3+39$

$=42$ students.