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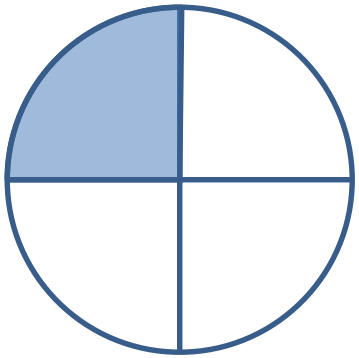
Shanghai Primary School attached to Shanghai Teachers' Professional College -----23th Jan. 2018

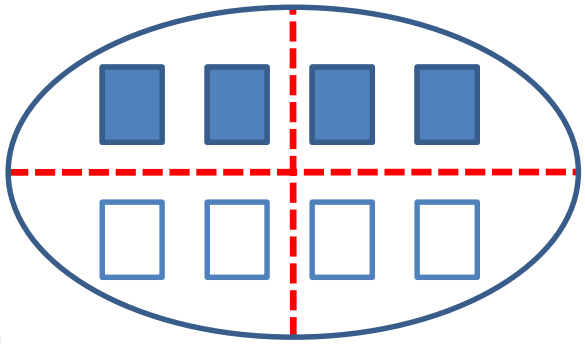
## Review: colour and fill in the blanks

$\frac{1}{4}$



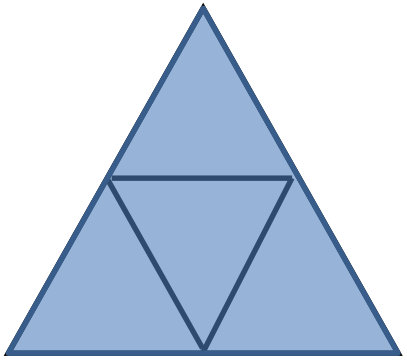
A circle is divided into ( 4 ) equal parts. The coloured part is ( $\frac{1}{4}$ )of the whole circle.

$\frac{1}{2}$



( 8 )rectangles are divided into 2 equal parts , ( 4 ) rectangles are $\frac{1}{2}$ of the whole.

$\frac{4}{4}$ = 1



$\frac{4}{4}$ equals to ( 4 ) $\frac{1}{4}$ s

$\frac{4}{4}$ equal to ( 1 )

## Review：

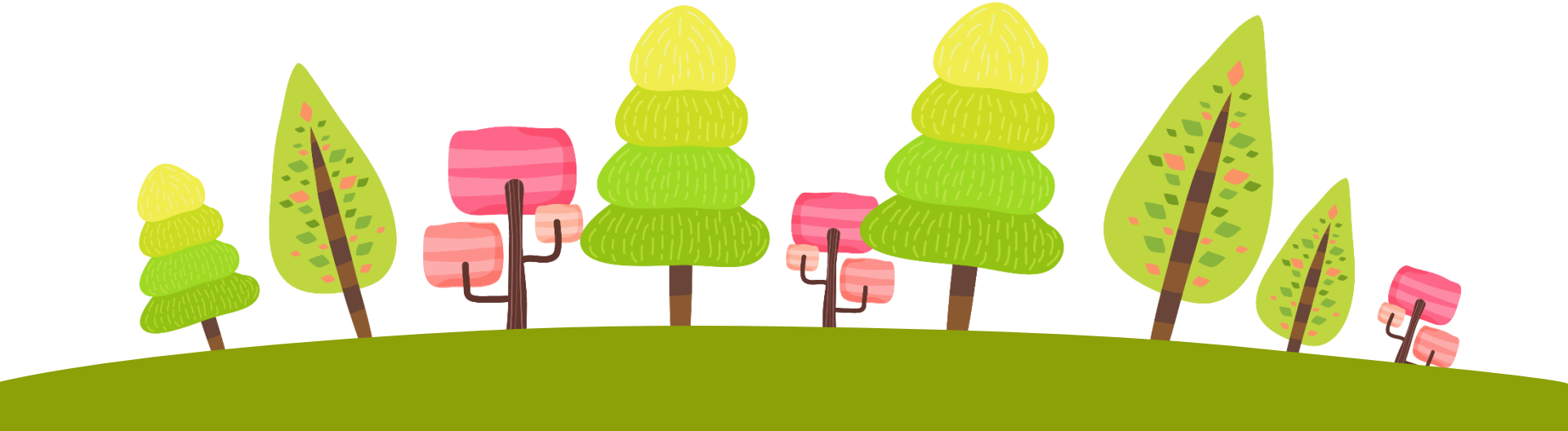
$\frac{3}{5}$ = （three） $\frac{1}{5}$ s

$\frac{7}{12}$ = （ seven） $\frac{1}{12}$ s

$\frac{9}{10}$ = （ nine ） $\frac{1}{10}$ s

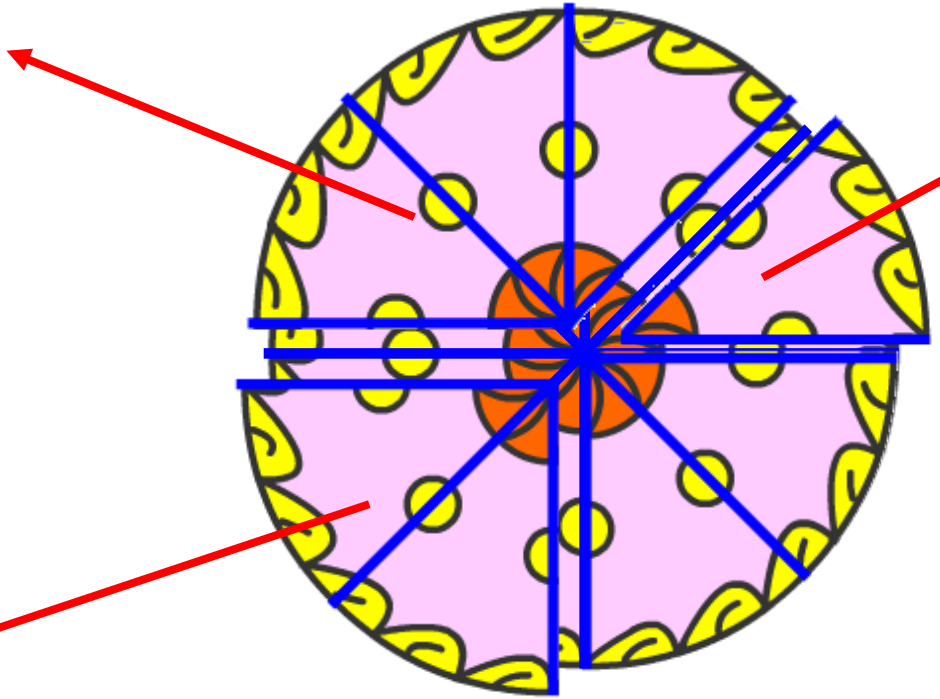
$\frac{5}{9}$ = （ five ） $\frac{1}{9}$ s

# Addition of fractions



# *Mum divided the cake into 8 equal parts*

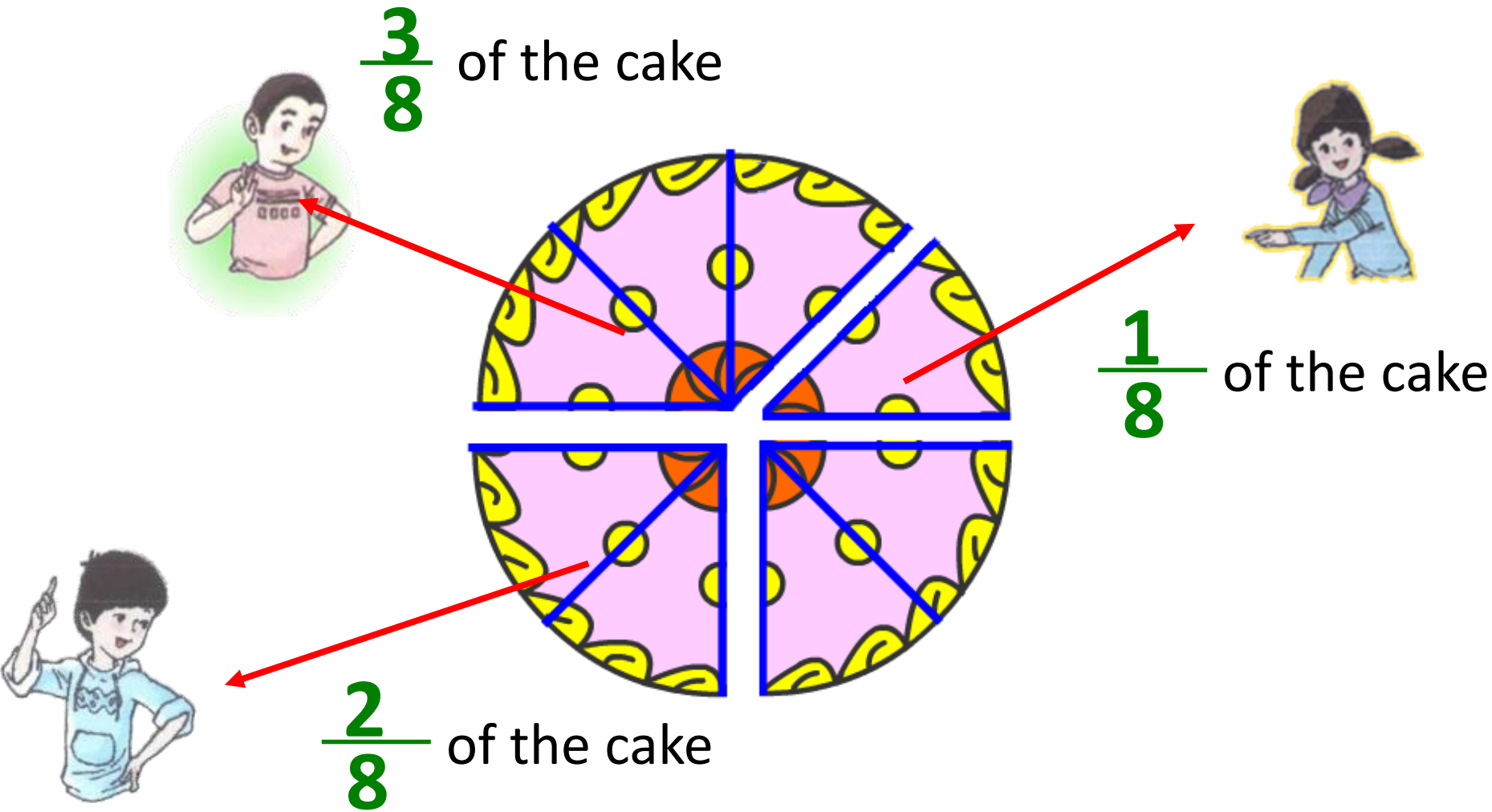
David ate 3 parts



Milly ate 1 part

Alex ate 2 parts

# *How many cake have they eaten?*

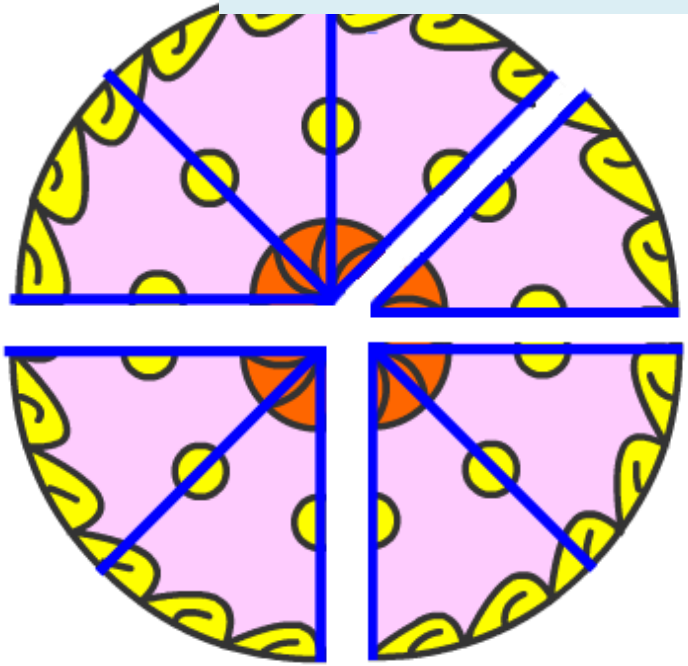


# How many cake have David and Alex eaten in all?

How many $\frac{1}{8}$ s add together?

$\frac{3}{8}$

$\frac{2}{8}$

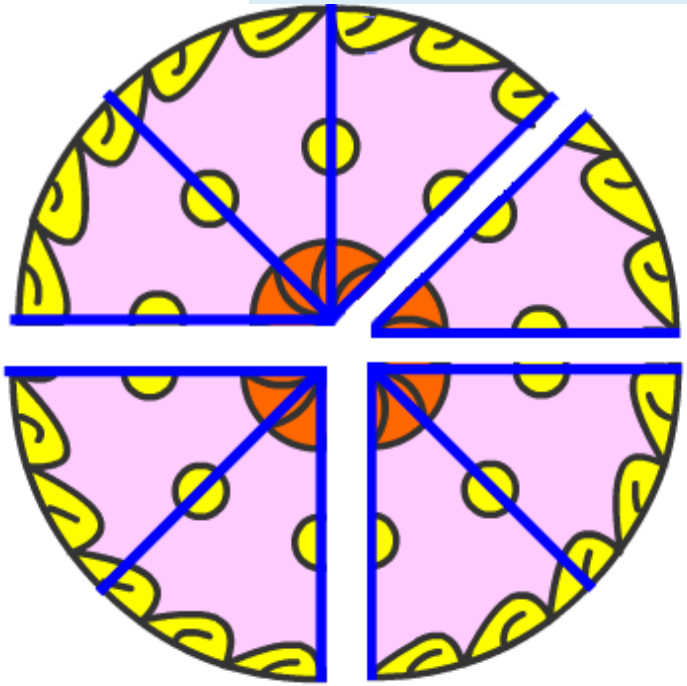


$$\frac{3}{8} + \frac{2}{8} = \frac{5}{8}$$

# How many cakes have David and Milly eaten in all?

How many $\frac{1}{8}$ s add together?

$\frac{3}{8}$



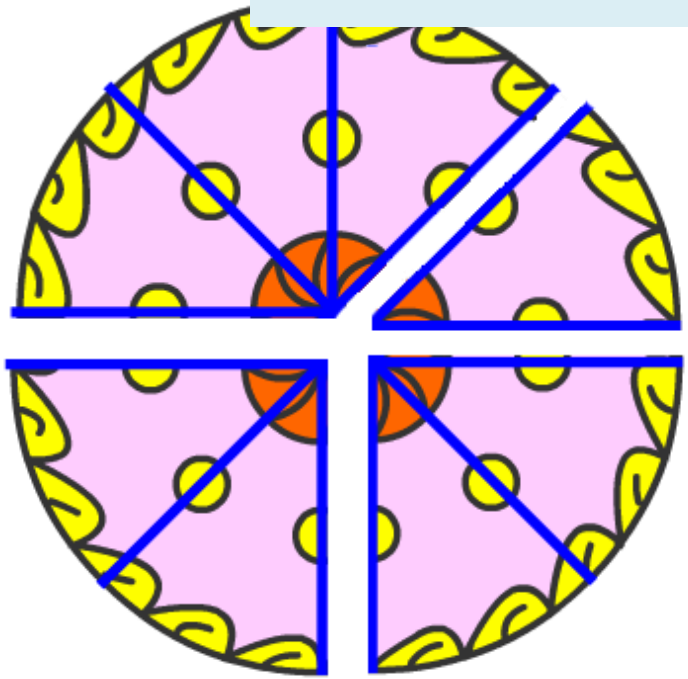
$\frac{1}{8}$

$$\frac{3}{8} + \frac{1}{8} = \frac{4}{8}$$

# How many cakes have Alex and Milly eaten in all?

How many $\frac{1}{8}$ s add together?

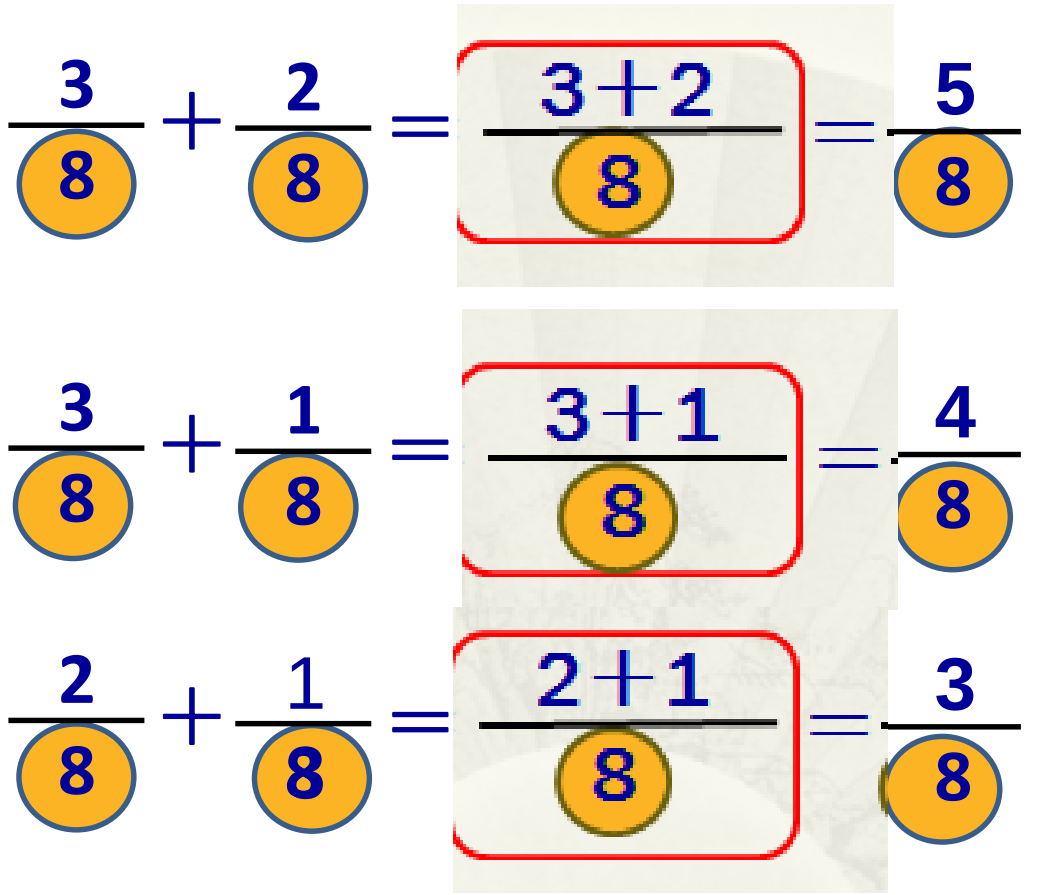
$\frac{2}{8}$



$\frac{1}{8}$

$$\frac{2}{8} + \frac{1}{8} = \frac{3}{8}$$

# How do we get the answers?



# Conclusion

***Adding fractions***

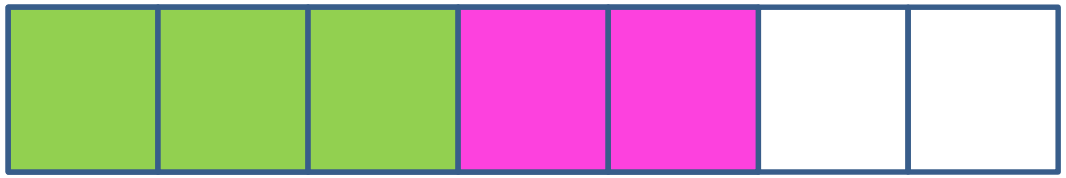
***with the same denominator.***

**Keep the denominator,**

**add the numerators.**

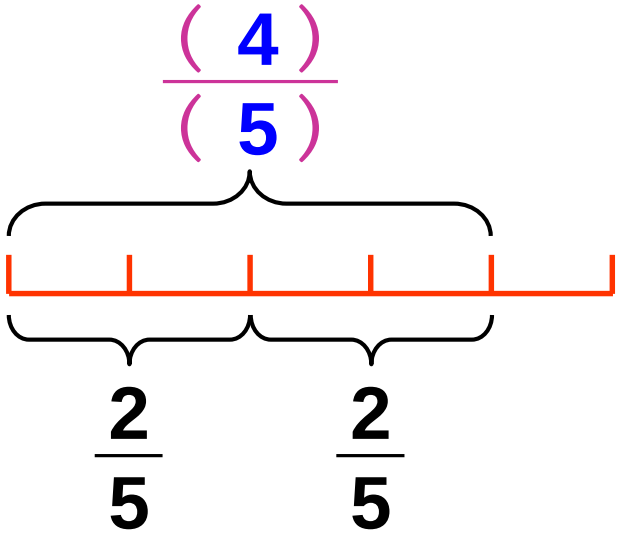
## Exercise1 :

$$\frac{3}{7} + \frac{2}{7} = ?$$

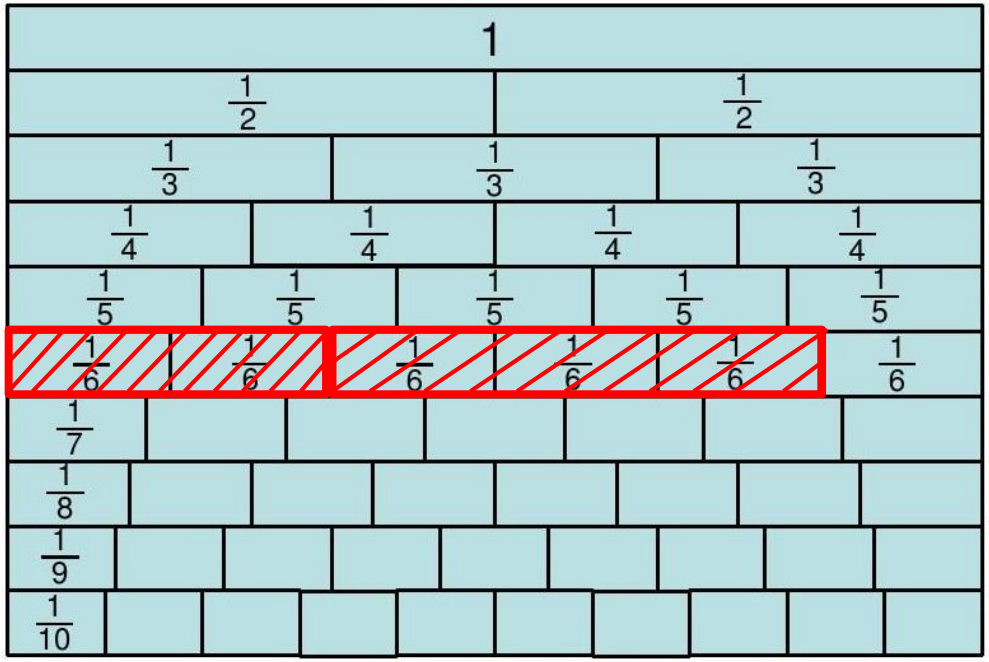


$$\frac{3}{7} + \frac{2}{7} = \frac{3+2}{7} = \frac{5}{7}$$

# Exercise 2 :



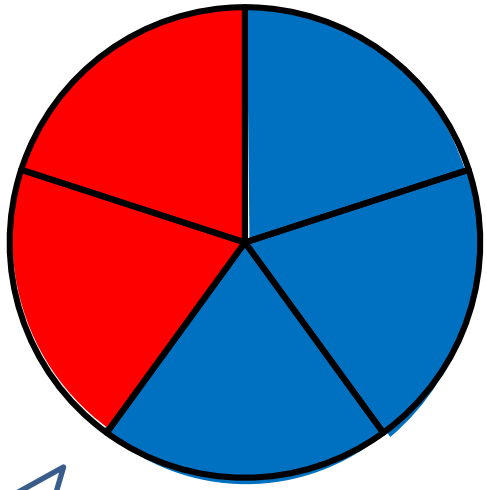

$$\frac{2}{5} + \frac{2}{5} = \frac{2+2}{5} = \frac{4}{5}$$




$$\frac{2}{6} + \frac{3}{6} = \frac{2+3}{6} = \frac{5}{6}$$

$$\frac{2}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} = \frac{2+1+1+1}{5}$$

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



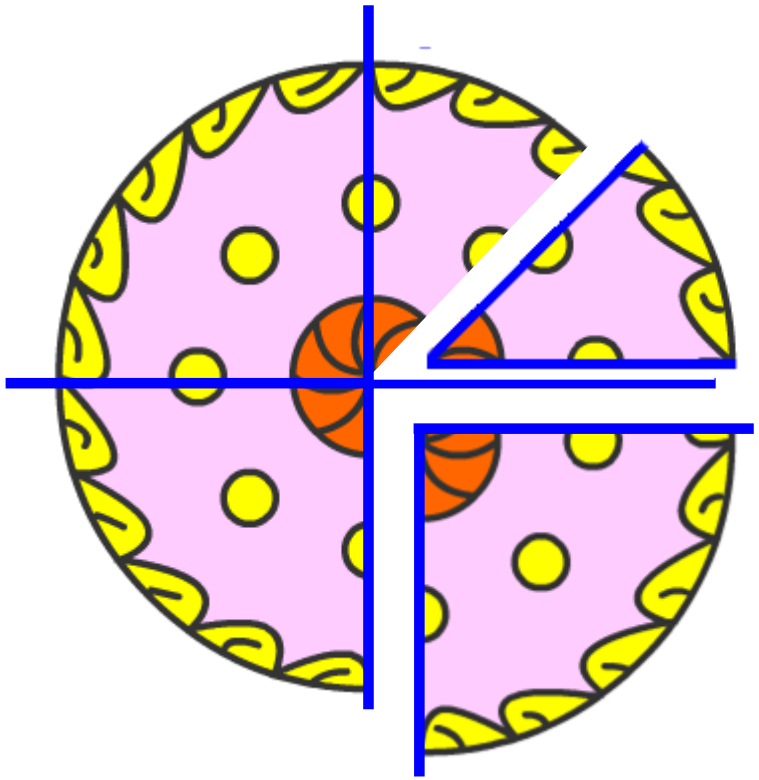
When the numerator and the denominator are same ,we use **1** to express it.

## Exercise 3 :

$$\frac{1}{11}+\frac{2}{11}+\frac{4}{11}=\frac{1+2+4}{11}=\frac{7}{11}$$

$$\frac{2}{26}+\frac{9}{26}+\frac{8}{26}=\frac{2}{26}+\frac{9}{26}+\frac{8}{26}=\frac{2+8+9}{26}=\frac{19}{26}$$

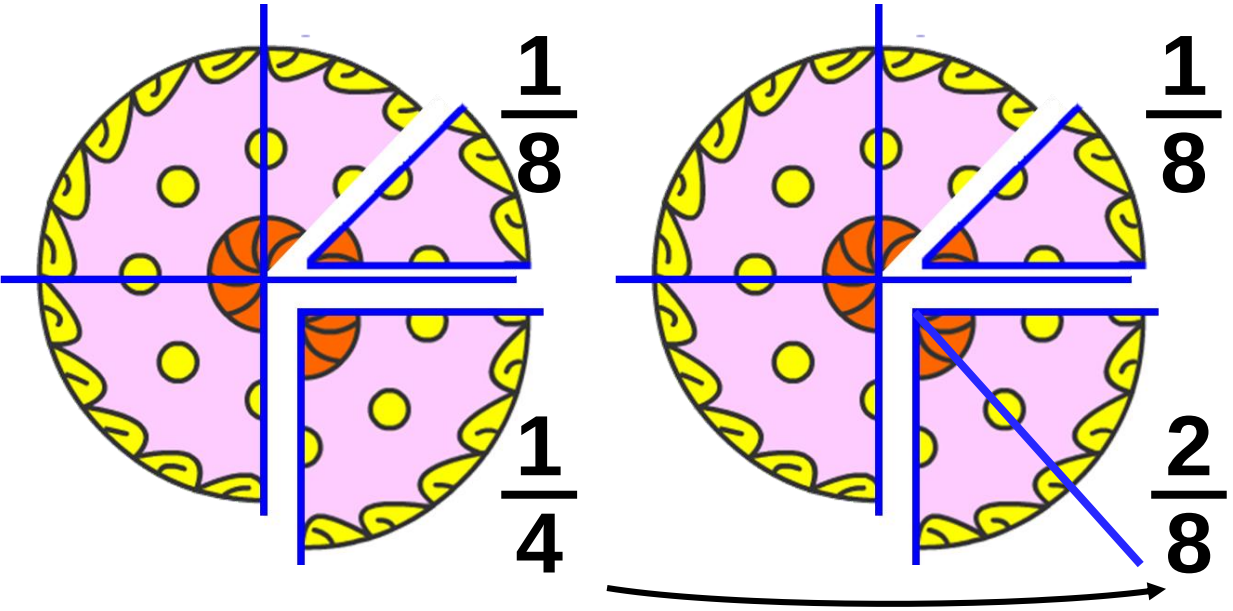
# *Alex and Milly got another cake.*



Milly ate $\frac{1}{8}$ of the cake.

Alex ate $\frac{1}{4}$ of the cake

**How many cakes have Alex and Milly eaten in all?**




$\frac{1}{4} = \frac{2}{8}$ (×2 above, ×2 below)

$\frac{1}{8} + \frac{1}{4} \stackrel{?}{=} \frac{1}{8} + \frac{2}{8} = \frac{3}{8}$

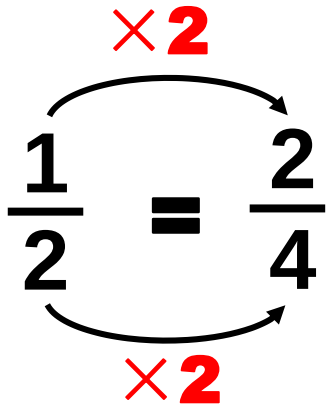
If you **multiple** or **divide** numerators and denominators by **the same number**, the new fraction will be equivalent to the original one.

**Before we add two fractions,**

**we must have the same denominator.**

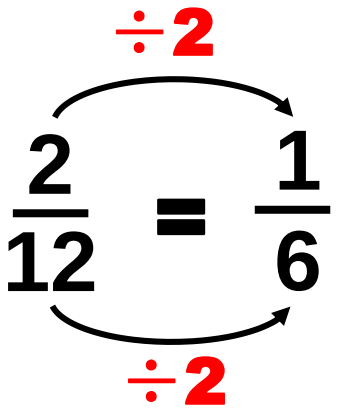
## Exercise 4 :

$$\frac{1}{2} + \frac{1}{4} = \frac{2}{4} + \frac{1}{4} = \frac{3}{4}$$

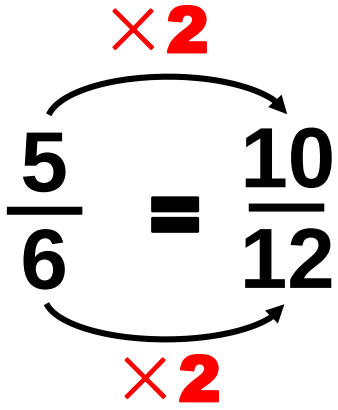


## Exercise 5 :

- $\frac{2}{12} + \frac{5}{6} = \frac{1}{6} + \frac{5}{6} = \frac{6}{6} = 1$




- $\frac{2}{12} + \frac{5}{6} = \frac{2}{12} + \frac{10}{12} = \frac{12}{12} = 1$



$\frac{1}{3} + \frac{1}{4} = \quad + \quad = \frac{7}{12}$

Challenge

They have the same common multiple of 12

$\frac{1}{3} = \frac{4}{12}$ (×4 above, ×4 below)

$\frac{1}{4} = \frac{3}{12}$ (×3 above, ×3 below)

Before we add two fractions,

we must have the same denominator.

What did you learn in this lesson?