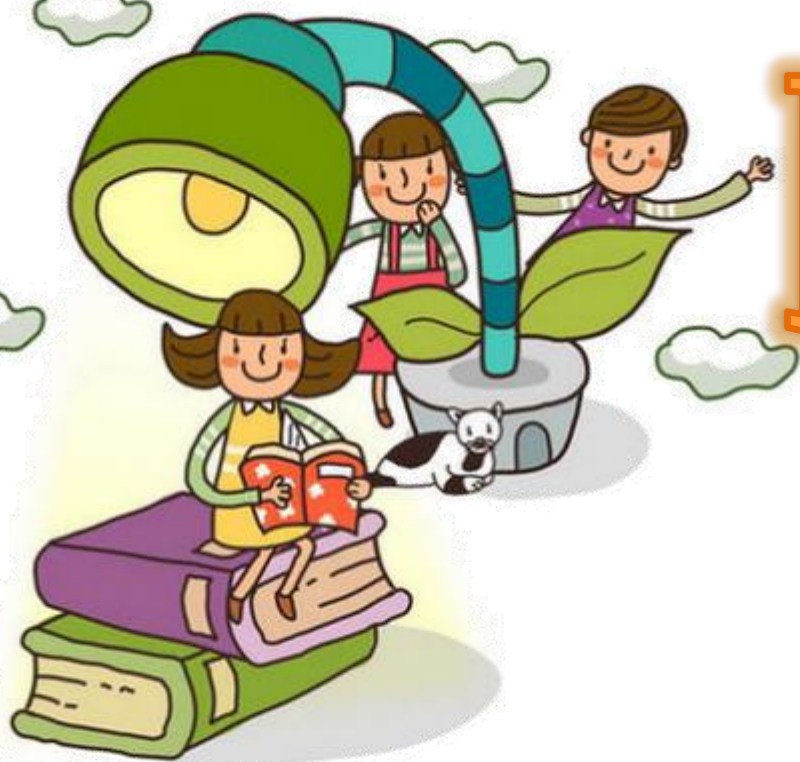


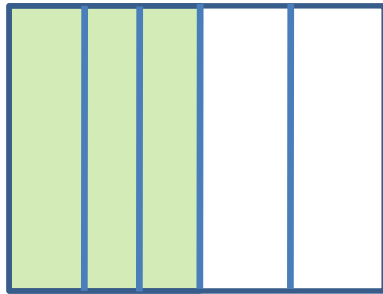
Fraction



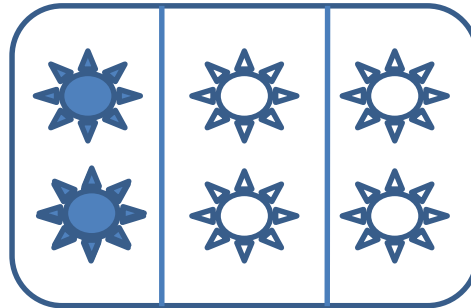


Review 1

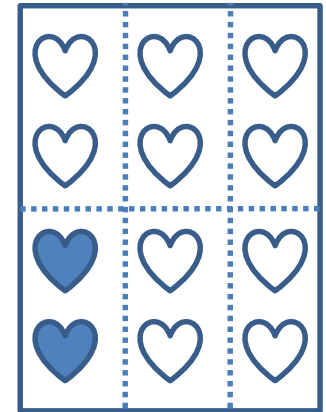
True or False (Can these fractions express the coloured parts in the whole?)



$$\frac{3}{5}$$



$$\frac{1}{3}$$



$$\frac{1}{6}$$

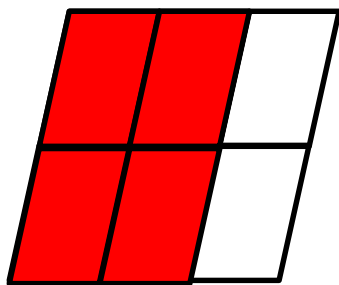




Review 2

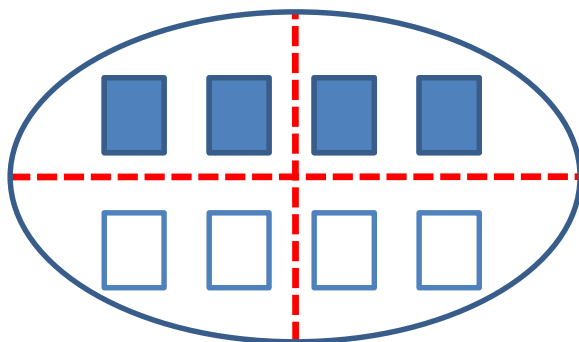
Colour the figures according to the fractions and fill in the brackets :

$$\frac{4}{6}$$



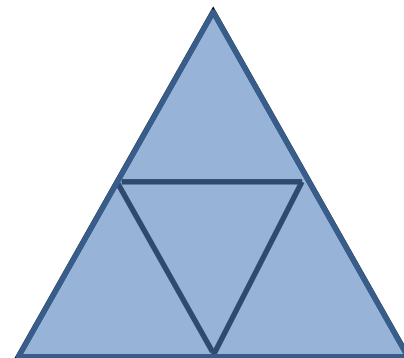
A shape is divided into (6) equal parts. The coloured part is $\frac{4}{6}$ of the whole shape.

$$\frac{1}{2}$$



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

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

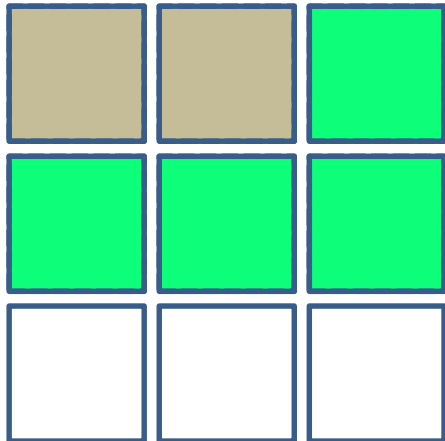


$\frac{4}{4}$ is made up of (four) $\frac{1}{4}$ we can also use (1) to express it .



problem solving

Mum bought a cake yesterday. She divided it into 9 equal parts.
David had $\frac{2}{9}$ of the whole cake, Dad had $\frac{4}{9}$ of the whole
cake. How many cakes did David and his Dad have in all?



$$\frac{2}{9} + \frac{4}{9} = \frac{2+4}{9} = \frac{6}{9}$$

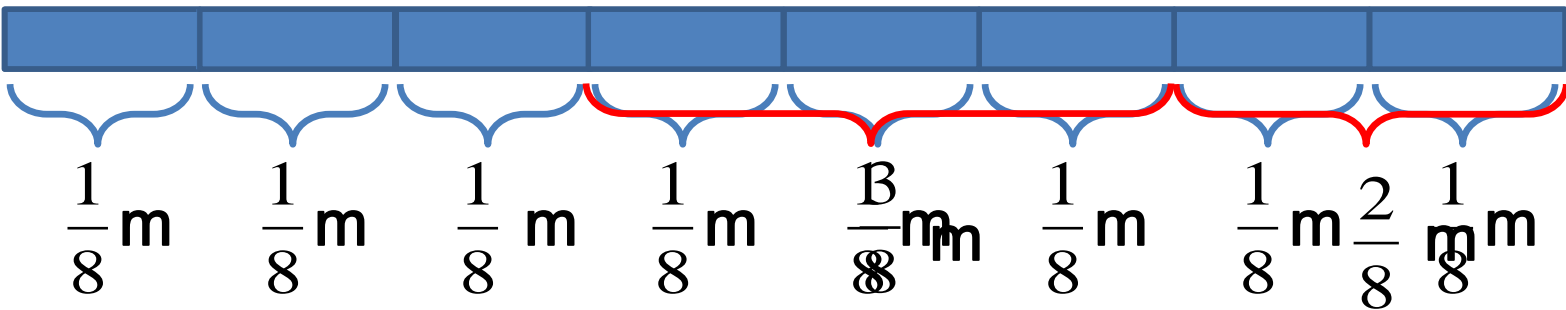




How many meters of the whole has the snail moved in all?



1 meter



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



conclusion:

$$\frac{2}{9} + \frac{4}{9} = \frac{2+4}{9} = \frac{6}{9}$$

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

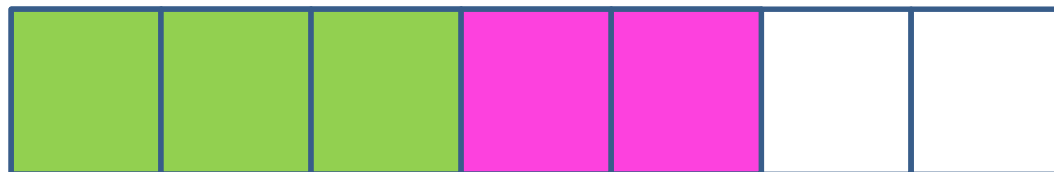
*Addition of fractions
with the same denominator.*

Keep the denominator the same ,
add their numerators.



Exercise 1 : Colour and Calculate

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



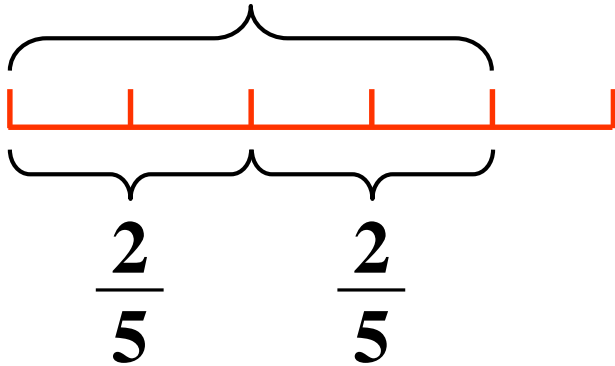
$$\frac{3}{7} + \frac{2}{7} = \frac{3+2}{7} = \frac{5}{7}$$





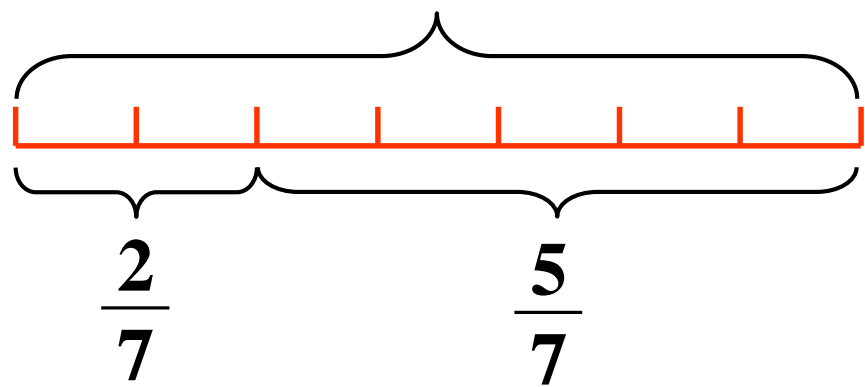
Exercise 2 : Calculate and fill in the brackets

$$\frac{(4)}{(5)}$$



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

$$\frac{(7)}{(7)} = 1$$



$$\frac{2}{7} + \frac{5}{7} = \frac{2+5}{7} = \frac{7}{7} = 1$$

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





Exercise 3 : Calculate directly

$$\frac{2}{5} + \frac{1}{5} = \frac{3}{5} \quad \frac{2}{7} + \frac{5}{7} = 1 \quad \frac{5}{18} + \frac{2}{18} = \frac{7}{18}$$



Exercise 4 : Calculate with the picture



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

$$\frac{2}{12} + \frac{4}{12} + \frac{5}{12} = \frac{2+4+5}{12} = \frac{11}{12}$$

$$\frac{7}{16} + \frac{6}{16} + \frac{3}{16} = \frac{7+6+3}{16} = \frac{16}{16} = 1$$

8.4 Addition and subtraction of simple fractions




Learning objective

Add and subtract fractions with the same denominator



Basic questions

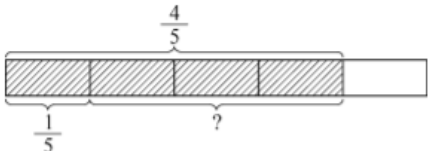
1 Look at the diagrams and add the fractions.

(a)  $\frac{1}{4} + \frac{2}{4} = (\quad)$

(b)  $\frac{2}{7} + \frac{3}{7} = (\quad)$

(c)  $\frac{3}{8} + \frac{5}{8} = (\quad) = (\quad)$

2 Look at the diagrams and complete the subtraction of fractions.

(a)  $\frac{4}{5} - \frac{1}{5} = (\quad)$

(b)  $\frac{7}{8} - \frac{3}{8} = (\quad) = (\quad)$

3 Calculate with addition of fractions.

(a) $\frac{1}{2} + \frac{1}{2} =$

(b) $\frac{2}{7} + \frac{4}{7} =$

(c) $\frac{1}{4} + \frac{3}{4} =$

$$(d) \frac{1}{3} + \frac{1}{3} = \quad (e) \frac{5}{9} + \frac{2}{9} = \quad (f) \frac{3}{5} + \frac{2}{5} =$$

4 Calculate with subtraction of fractions.

$$(a) \frac{5}{8} - \frac{3}{8} = \quad (b) 1 - \frac{1}{2} = \quad (c) \frac{4}{9} - \frac{4}{9} =$$

$$(d) \frac{6}{7} - \frac{1}{7} = \quad (e) \frac{3}{4} - \frac{1}{4} = \quad (f) \frac{4}{5} - 0 =$$

5 Anna was reading a book. The book had 24 pages in total. She read 3 pages on the first day, 4 pages on the second day and 5 pages on the third day.

(a) Express the fraction of the book Anna read on each day.

First day: _____ Second day: _____ Third day: _____

(b) What fraction of the book did Anna read on the first two days?

Answer: _____

(c) What fraction of the book had Anna read on the first three days?

Answer: _____

(d) Which fraction of the book had Anna not read?

Answer: _____

How many pages had she not read?

Answer: _____



Challenge and extension question

6 Fill in the brackets.

Joan's grandma bought 12 pears to share. She gave Joan and Joan's brother Tom 3 pears each. She then kept 1 pear to herself and gave the rest to Joan's mother.

Simple fractions and their addition and subtraction

(a) Grandma got () of all the pears, Joan got () of all the pears, Tom got () of all the pears, and Joan's mother got () of all the pears. (Fill in with fractions.)

(b) What fraction of all the pears did Joan and her brother get in total? Write the number sentence and calculate the answer.

Number sentence: _____

(c) What fraction of all the pears did Joan, her brother and mother get altogether?

Number sentence: _____

(d) Who got the most? Who got the least? What is the difference? (Write the number sentence and find the difference in fraction.)

Answer: _____ got the most; _____ got the least.

The difference is: _____ = _____ of the total appears. It is () pears.