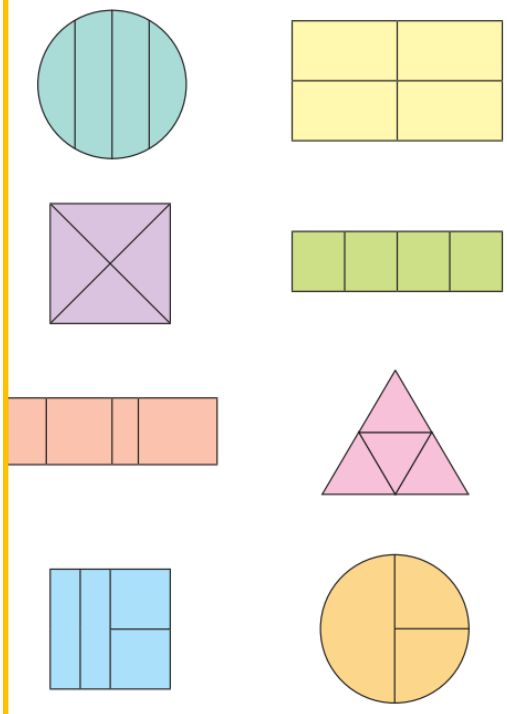
Session 1

Understanding the whole

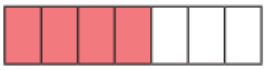
Which shapes show equal parts?



What fraction of each shape is shaded?

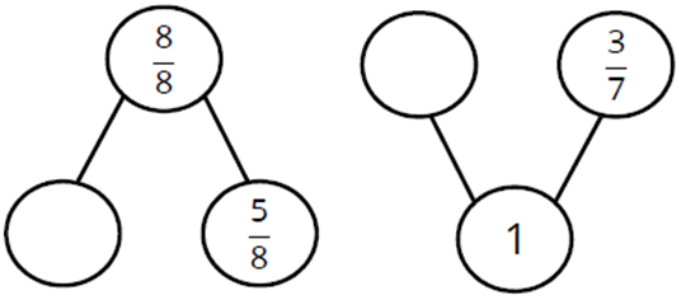
What fraction is not shaded?

a)

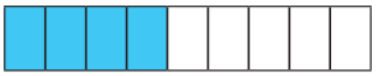


b)

Complete the part-whole models.



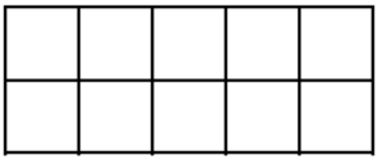
a) Shade the bar model to make one whole.



b) Complete the addition.

$\frac{4}{9} + \square = 1$

Use the 10 frame to help you complete the calculations.



$\frac{2}{10} + \frac{\square}{\square} = \frac{10}{10}$

$1 - \frac{\square}{\square} = \frac{7}{10}$

Here are some shapes.

What fraction of the shapes are circles?

What fraction of the shapes are triangles?

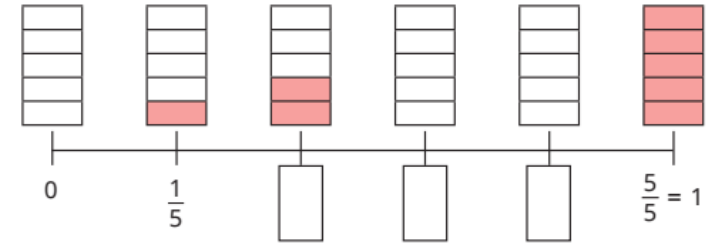
Complete the additions.

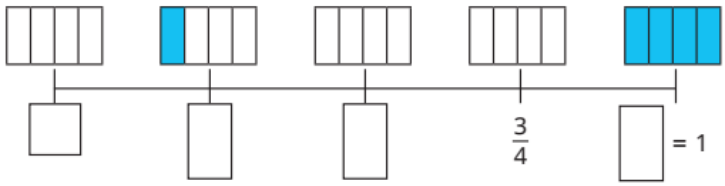
a) $\frac{5}{7} + \square = 1$ **b)** $\square + \frac{3}{5} = 1$ **c)** $1 = \frac{4}{11} + \square$ **d)** $1 = \square + \frac{21}{39}$

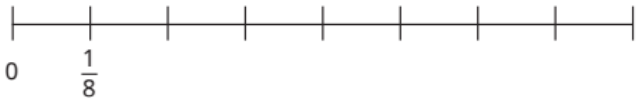
Session 2

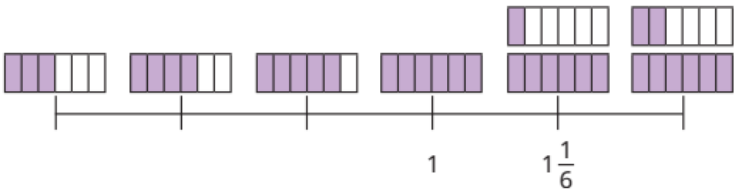
MPI: Count beyond 1

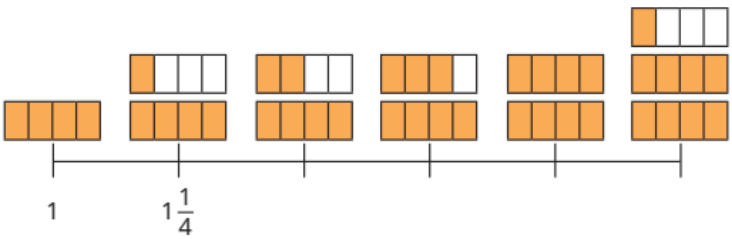
Complete the number lines.

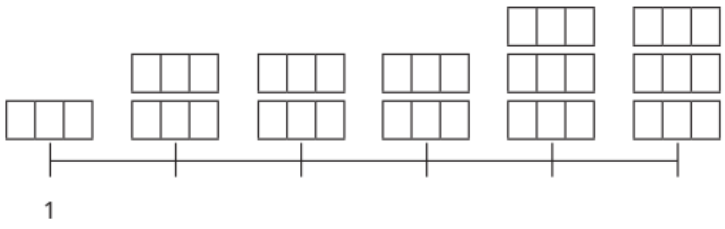












Complete the number tracks.

a)

$\frac{6}{8}$	$\frac{7}{8}$	1			

b)

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

c)

$1\frac{5}{9}$	$1\frac{7}{9}$	2			

d)

$3\frac{3}{5}$	$3\frac{1}{5}$	$2\frac{4}{5}$			

Tiny is counting forwards in sixths.

$1\frac{4}{6}$	$1\frac{5}{6}$	$2\frac{1}{6}$	$2\frac{2}{6}$	$2\frac{3}{6}$

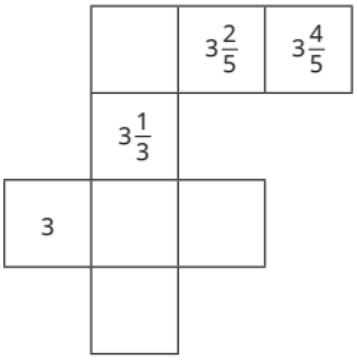
What mistake has Tiny made?

Session 2

MPI: Count beyond 1 **CHALLENGE**

The grid is made up of three number tracks.

Work out the missing numbers.



Dani is counting forward in $\frac{2}{9}$s from 3

Tom is counting backwards in $\frac{3}{9}$s from 5

a) What numbers will they both say?

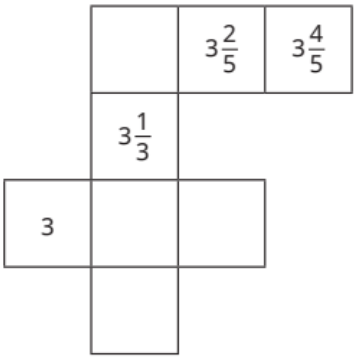
b) How many integers less than 10 will Dani and Tom each say?

Session 2

MPI: Count beyond 1 **CHALLENGE**

The grid is made up of three number tracks.

Work out the missing numbers.



Dani is counting forward in $\frac{2}{9}$s from 3

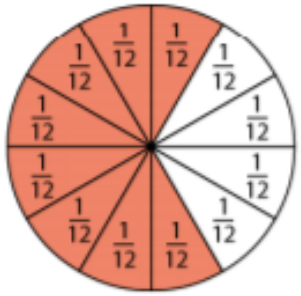
Tom is counting backwards in $\frac{3}{9}$s from 5

a) What numbers will they both say?

b) How many integers less than 10 will Dani and Tom each say?

Session 3

Representing fractions as multiplication



___ + ___ + ___ + ___ + ___ + ___ + ___ + ___

___ x ___ ___ x ___

$\frac{1}{9}+\frac{1}{9}+\frac{1}{9}=\square\times\frac{1}{9}$

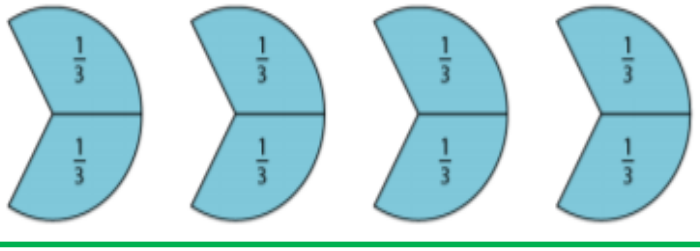
$\frac{1}{9}+\frac{1}{9}+\frac{1}{9}+\frac{1}{9}=\square\times\frac{1}{9}$

$\frac{1}{9}+\frac{1}{9}+\frac{1}{9}+\frac{1}{9}+\frac{1}{9}=5\times\square$

$\frac{1}{9}+\frac{1}{9}+\frac{1}{9}+\frac{1}{9}+\frac{1}{9}+\frac{1}{9}=\frac{1}{9}\times\square$

$\square=6\times\frac{1}{8}$

$\square=\frac{1}{8}\times5$



___ + ___ + ___ + ___

___ x ___ ___ x ___

$\frac{3}{5}+\frac{3}{5}+\frac{3}{5}+\frac{3}{5}=\square\times\frac{3}{5}$

$\frac{3}{5}+\frac{3}{5}+\frac{3}{5}+\frac{3}{5}+\frac{3}{5}+\frac{3}{5}=6\times\square$

$\square=3\times\frac{2}{7}$

$\square=\frac{8}{7}\times4$

Session 3

CHALLENGE

1. Choose a number between 7 - 10. This is the denominator
2. Roll a 6 sided dice. The number you roll gives you the numerator.
3. Roll the dice again. This tells you what you are multiplying by.
4. Journal in your book what the repeated addition and multiplica-

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

Session 3

CHALLENGE

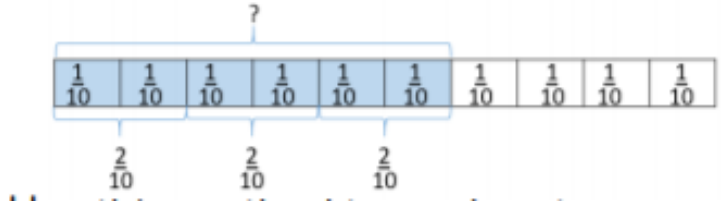
1. Choose a number between 7 - 10. This is the denominator
2. Roll a 6 sided dice. The number you roll gives you the numerator.
3. Roll the dice again. This tells you what you are multiplying by.
4. Journal in your book what the repeated addition and multiplica-

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

Session 4

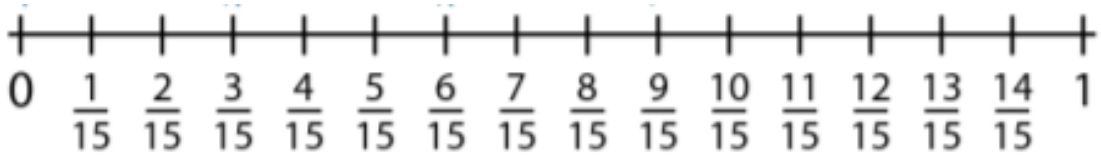
Multiplying fractions by a whole number

Use the model to help you solve $3 \times \frac{2}{10} = \frac{\square}{\square}$



$\frac{3}{15} \times 3 = \frac{\square}{\square}$

Use the number line to show how to work out this equation.



$\frac{3}{20} \times 4 = \frac{\square}{\square}$

$3 \times \frac{5}{18} = \frac{\square}{\square}$

$6 \times \frac{2}{14} = \frac{\square}{\square}$

$\frac{4}{11} \times 2 = \frac{\square}{\square}$

In a sports session, Year 4 run 2/9km 3 times. How far did they run in total?

Session 4

CHALLENGE

Amir is multiplying fractions by a whole number.

$$\frac{1}{5} \times 5 = \frac{5}{25}$$

Can you explain his mistake?

I am thinking of a unit fraction.

When I multiply it by 4 it will be equivalent to $\frac{1}{2}$

When I multiply it by 2 it will be equivalent to $\frac{1}{4}$

What is my fraction?

1.

What do I need to multiply my fraction by so that my answer is equivalent to $\frac{3}{4}$?

Can you create your own version of this problem?

2.

You need to multiply it by _____

Own version:

Journalling moment!

'How many ways can you complete this equation?'

$$\frac{24}{25} = \frac{\square}{\square} \times \frac{\square}{25}$$