

Term 2: Sample lesson structure (Week 1 and 2)

- Each section has a video link – where you can watch a video on the maths section. Type in the link and watch the video.
- After each activity, mark your work to check your progress. See the attached Memo book.

Chapter 1: Fractions – Identify, equivalent, simplify and order

Screencast video link: Fractions part 1 – identify and equivalence

<http://screencast-o-matic.com/u/hg3j/Grd7-sample-channel>

Identifying fractions

Fractions are parts of a whole, where the whole has been divided into equal parts.

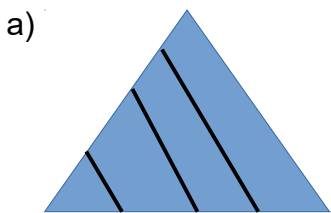
How many parts of the whole we are using, eating, etc.

$$\frac{N}{D}$$

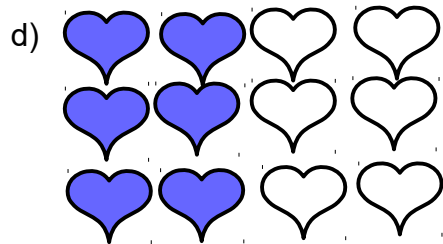
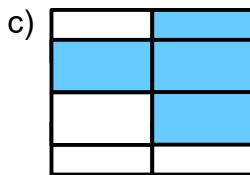
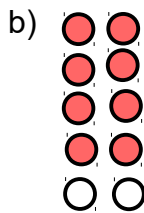
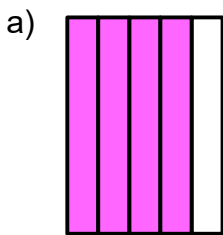
How many equal parts the whole has been divided into.

Activity 1

1. Do these diagrams represent fractions? Why?



2. Identify the fraction of the shaded part.



3. Write the fractions above in words.

a) _____

b) _____

c) _____

d) _____

4. Draw the following fractions.

a) $\frac{5}{8}$

b) Seven-tenths

5. Look at the diagram and answer the questions that follow:

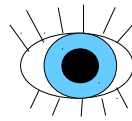
A		B			D	E	
		C					

a) Identify the fractions:

A = _____ B = _____ C = _____ D = _____ E = _____

b) What is the fraction occupied by D and E together? _____

6. Record the eye colour of your family or friend group. _____



a) Write the eye colours as fractions. _____

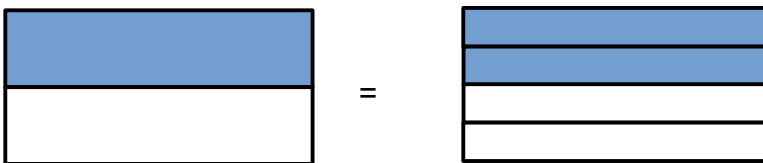
b) Which eye colour occurs the most? _____

c) Which eye colour occurs the least? _____

Equivalent fractions

Fractions that are equal to each other.

E.g.



$$\frac{1}{2} = \frac{2}{4} \quad \frac{1}{2} = \frac{2}{4}$$

$\begin{matrix} \times 2 \\ \curvearrowright \\ \frac{1}{2} = \frac{2}{4} \\ \curvearrowleft \\ \times 2 \end{matrix}$

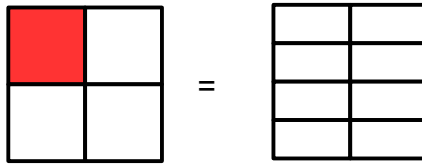
(What you do to the top you have to do to the bottom)

If a numerator or denominator is missing, check what the pattern is: "What did you multiply or divide the numerator / denominator with to get the other numerator / denominator."

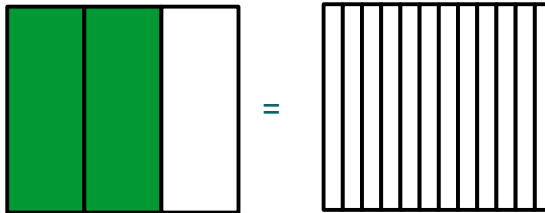
Activity 2

1. Fill in the missing numbers, numerators or denominators and colour in the missing fractions below:

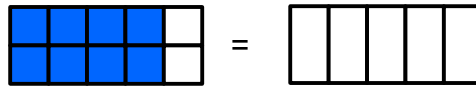
a) $\frac{1}{4} \times 2 = \frac{\quad}{8}$



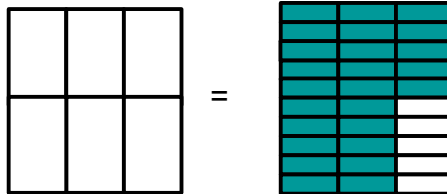
b) $\frac{2}{3} \times \quad = \frac{8}{\quad}$



c) $\frac{8}{10} \div \quad = \frac{\quad}{5}$



d) $\frac{\quad}{6} = \frac{25}{30}$



e) $\frac{9}{\quad} = \frac{3}{4}$

f) $\frac{5}{12} = \frac{15}{\quad}$

g) $\frac{\quad}{20} = \frac{3}{4}$

h) $\frac{2}{7} = \frac{\quad}{21}$

Simplifying fractions

Screencast video link: *Fractions part 2 – simplifying and ordering*

<http://screencast-o-matic.com/u/hg3j/Grd7-sample-channel>

- Divide the numerator and denominator with the same number until you can't divide any more. You can think of it as simple fractions.
- It is also called the lowest terms.
- These simplified fractions are also equivalent fractions.

E.g.

$\div 2$

$$1) \frac{2}{4} = \frac{1}{2}$$

$$2) \frac{12}{20} = \frac{6}{10} = \frac{3}{5}$$

Activity 3

1. Simplify the following fractions:

a) $\frac{10}{15} =$

b) $\frac{6}{8} =$

c) $\frac{12}{15} =$

d) $\frac{20}{50} =$

2. Write the fractions in their lowest terms:

a) $\frac{16}{20} =$

b) $\frac{7}{9} =$

c) $\frac{49}{56} =$

d) $\frac{80}{120} =$

Ordering (arranging) fractions

- The denominator tells you how many pieces the whole has been divided into. If the numerators are the same, then look at the denominators. The bigger the denominator the smaller the fraction.

- If you are unsure, try to convert the fractions into equivalent fractions. Show your conversions.

- Keep your answers in the same format as the question.

Activity 4

1. Arrange from smallest to biggest (ascending):

$$\left\{ \frac{1}{5} ; \frac{1}{2} ; \frac{1}{8} ; \frac{1}{10} \right\}$$

2. Arrange in descending order (biggest to smallest):

$$\left\{ \frac{2}{3} ; \frac{5}{6} ; \frac{7}{12} ; \frac{1}{2} \right\}$$

3. Arrange in ascending order:

$$\left\{ \frac{3}{4} ; \frac{5}{8} ; \frac{4}{6} ; \frac{7}{12} \right\}$$

4. Arrange in descending order:

$$\left\{ \frac{3}{5} ; \frac{11}{15} ; \frac{2}{3} ; \frac{1}{2} \right\}$$

5. Four friends from different schools received the following marks for their fractions test:

$$\text{Joe} = \frac{77}{100} \quad \text{Sarah} = \frac{19}{25} \quad \text{Jack} = \frac{17}{20} \quad \text{Daisy} = \frac{40}{50}$$

a) Who received the highest mark for their test? _____

b) Arrange the marks in ascending order. _____

c) In your opinion did this group of children receive good marks? Give a reason for your answer. _____

6. Insert > ; < or = (Show proof: use equivalent fractions or simplify)

$$\text{a) } \frac{1}{11} \text{ — } \frac{1}{9} \quad \text{b) } \frac{3}{4} \text{ — } \frac{15}{20} \quad \text{c) } \frac{4}{5} \text{ — } \frac{700}{1000} \quad \text{d) } \frac{5}{7} \text{ — } \frac{10}{12}$$