

TO RECOGNISE, CLASSIFY AND REPRESENT FRACTIONS (POSITIVE NUMBERS)*

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1 MATHEMATICS

2 Grade 5

3 ORDINARY AND DECIMAL FRACTIONS

4 Module 45

5 TO RECOGNISE, CLASSIFY AND REPRESENT FRACTIONS (POSITIVE NUMBERS)

5.1 Activity 1:

5.2 To recognise, classify and represent fractions (positive numbers) in order to describe and compare them [LO 1.3.2]

1. How much do you still remember of what you learnt about fractions in Gr. 4? Let us start with a competition – girls against boys! Take turns and see if you can answer the following questions. Your educator will tell you who must answer first and will also award points (2 points for every correct answer and 5 points if the boys can answer a question that the girls can't, and vice versa).

1.1 What is a fraction?

1.2 If I write $\frac{2}{5}$ what do I call the 2?

1.3 What operation sign can replace the — in $\frac{2}{5}$?

1.4 What is the function of the denominator?

1.5 If I cut up a whole into more and more sections, each section becomes _____

1.6 What do I call the 7 in $\frac{4}{7}$?

1.7 Fractions of the same size are called _____ fractions.

1.8 The fewer the number of sections the whole is divided into, the _____ they are.

1.9 What is the function of the numerator?

1.10 How do we simplify our fractions?

LET US REVISE

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A fraction is an **equal** part of a whole.



Figure 1

Four-fifths

4: Counts how many equal parts I am working with and is called the numerator.

5: The denominator says how many equal parts the whole has been divided into.

2. Let us test your knowledge by means of a few practical activities. Look at the following and answer the questions:

2.1 Colour in the figures that show halves:

(a) (b) (c) (d)

2.2 Colour in only the figures that show quarters:

(a) (b) (c)

(d) (e)

2.3 Neatly colour in the figures that show sixths:

(a) (b) (c) (d)

2.4 Why didn't you colour in the other figure c?

2.5 What fraction is cut out in each of the following figures?

i) ii) iii) iv) v) vi)

vii) viii) ix) x) xi)

5.3 Activity 2:

5.4 To recognise, classify and represent fractions (positive numbers) in order to describe and compare them [LO 1.3.2]

5.5 To use tables to sort and record data [LO 5.3]

1. In the next activity we are going to find out whether you can recognise and then record the fractions correctly. Look at the figures and then complete the table.

A.



Figure 2

B.



Figure 3

C.



Figure 4

D.



Figure 5

E.



Figure 6

F.



Figure 7

G.



Figure 8

H.



Figure 9

I.



Figure 10

J.



Figure 11

K.



Figure 12

	Diagram	Number of equal parts	Number of parts coloured in	Fraction coloured in	Number of parts not coloured in	Fraction not coloured in
E.g.	A	3	1	$\frac{1}{3}$	2	$\frac{2}{3}$
	B	.....	.....	.....	.....	.....
	C	.....	.....	.....	.....	.....
	D	.....	.....	.....	.....	.....
	E	.....	.....	.....	.....	.....
	F	.....	.....	.....	.....	.....
	G	.....	.....	.....	.....	.....
	H	.....	.....	.....	.....	.....
	I	.....	.....	.....	.....	.....
	J	.....	.....	.....	.....	.....
	K	.....	.....	.....	.....	.....

Table 1

Did you know?

$\frac{2}{5}$	is a proper fraction. The numerator is smaller than the denominator.
$\frac{9}{4}$	is an improper fraction. The numerator is bigger than the denominator.
$1\frac{2}{3}$	is a mixed number . A mixed number is always bigger than 1 and consists of a whole number (1) plus a fraction ($\frac{2}{3}$).

Table 2

5.6 Activity 3:

5.7 To calculate by means of computations that are suitable to be used in adding ordinary fractions [LO 1.8.3]

1. Can you still remember how to add fractions? Let us see. Work together with a friend. Take turns to say the answers. Choose any two fractions and add them. Give your answer first as an improper fraction and then as a mixed number.

Ask your teacher’s help if you struggle.

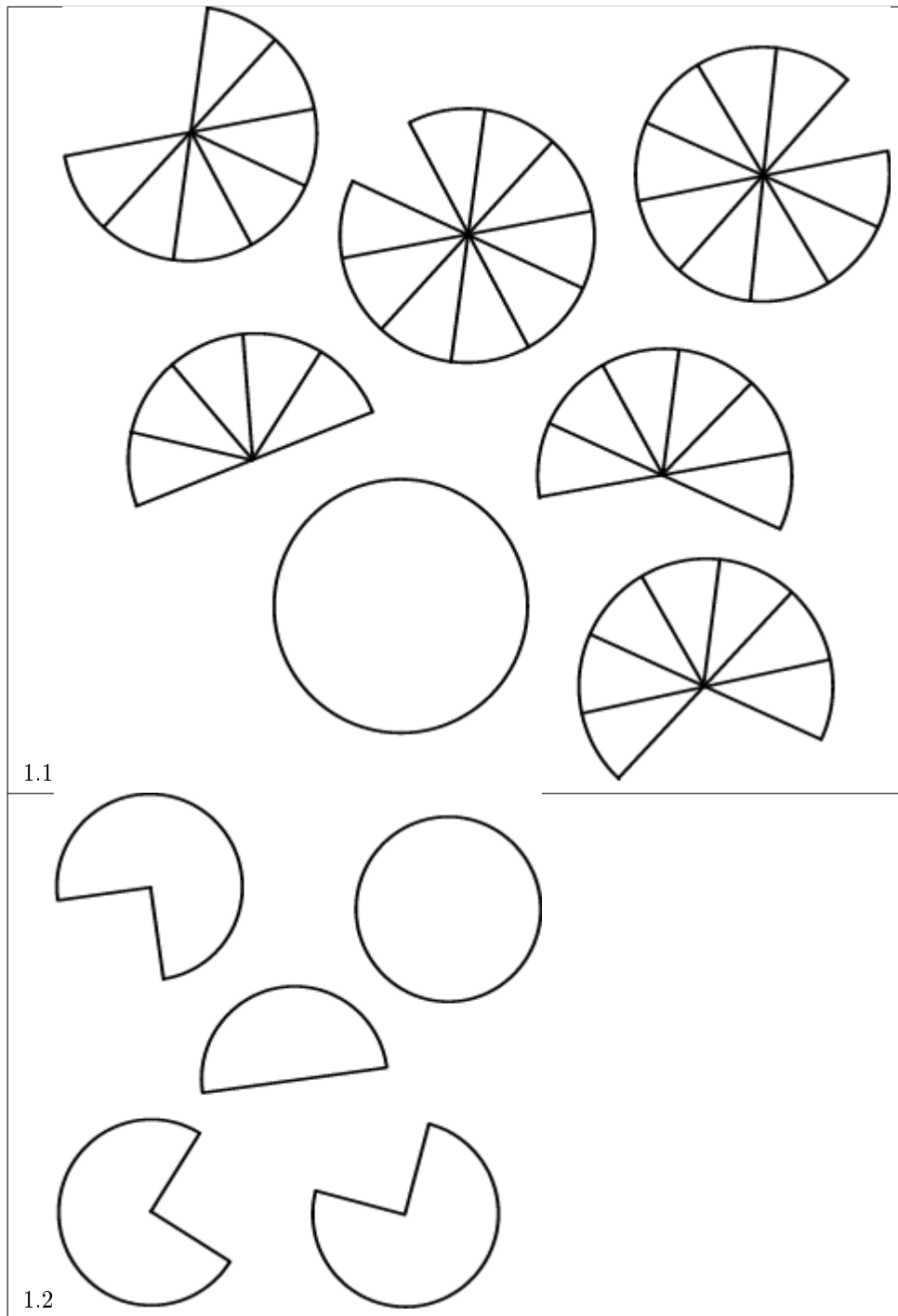


Table 3

5.8 Activity 4:

5.9 To recognise and use equivalent forms [LO 1.5.1]

1. Look carefully at the following questions and then complete them as neatly as possible.

EQUIVALENT FRACTIONS

1.1 Colour $\frac{1}{2}$ of the figure in blue:								
1.2 Colour $\frac{2}{4}$ of the figure in green:								
1.3 Colour $\frac{4}{8}$ of the figure in yellow:								
1.4 Colour $\frac{8}{16}$ of the figure in red:								

Table 4

- What do you notice?

1.6 Complete:	1	=	....	=	4	=	....
	2		4		....		16

Table 5

Did you know?

We call fractions that are equal in size, **equivalent** fractions. The word equivalent means **‘the same as’**. Thus the fractions are equal.

Do you remember?

1 unit											
$\frac{1}{2}$						$\frac{1}{2}$					
$\frac{1}{3}$				$\frac{1}{3}$				$\frac{1}{3}$			
$\frac{1}{4}$			$\frac{1}{4}$			$\frac{1}{4}$			$\frac{1}{4}$		
$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$	
$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$	
$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$
$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$
$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$
$\frac{1}{11}$	$\frac{1}{11}$	$\frac{1}{11}$	$\frac{1}{11}$	$\frac{1}{11}$	$\frac{1}{11}$	$\frac{1}{11}$	$\frac{1}{11}$	$\frac{1}{11}$	$\frac{1}{11}$	$\frac{1}{11}$	$\frac{1}{11}$
$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$

Table 6

2. The following activity will prepare you for the addition and subtraction of fractions. Use your knowledge of equivalent fractions and answer the following. Where you are in doubt, use the diagram above.

- 2.1: $\frac{1}{2} = \frac{\dots}{10}$
- 2.2: $\frac{2}{3} = \frac{\dots}{6}$
- 2.3: $\frac{1}{5} = \frac{8}{10}$
- 2.4: $\frac{1}{4} = \frac{\dots}{12}$
- 2.5: $\frac{1}{5} = \frac{\dots}{12}$
- 2.6: $\frac{4}{10} = \frac{\dots}{5}$
- 2.7: $\frac{1}{3} = \frac{3}{5}$
- 2.8: $\frac{\dots}{6} = \frac{1}{2}$
- 2.9: $\frac{3}{6} = \frac{\dots}{12}$
- 2.10: $\frac{4}{6} = \frac{\dots}{9}$

6 Assessment

Learning outcomes(LOs)
LO 1
Numbers, Operations and RelationshipsThe learner is able to recognise, describe and represent numbers and their relationships, and counts, estimates, calculates and checks with competence and confidence in solving problems.
<i>continued on next page</i>

Assessment standards(ASs)
We know this when the learner:
1.1 counts forwards and backwards fractions;
1.2 describes and illustrates various ways of writing numbers in different cultures (including local) throughout history;
1.3 recognises and represents the following numbers in order to describe and compare them: <ul style="list-style-type: none"> • common fractions to at least twelfths;
1.5 recognises and uses equivalent forms of the numbers listed above, including:
1.5.1 common fractions with denominators that are multiples of each other;
1.6 solves problems in context including contexts that may be used to build awareness of other Learning Areas, as well as human rights, social, economic and environmental issues such as: <ul style="list-style-type: none"> • financial (including buying and selling, profit and loss, and simple budgets);
LO 5
Data handlingThe learner will be able to collect, summarise, display and critically analyse data in order to draw conclusions and make predictions, and to interpret and determine chance variation.
We know this when the learner:
5.3 organises and records data using tallies and tables;
5.5 draws a variety of graphs to display and interpret data (ungrouped) including: <ul style="list-style-type: none"> • a pie graph.

Table 7

7 Memorandum

ACTIVITY 1

- 1.1 Equal parts of a whole
- 1.2 Nominator
- 1.3
- 1.4 Say in how many equal parts the whole is divided
- 1.5 Smaller
- 1.6 Nominator
- 1.7 Equivalentents
- 1.8 Larger
- 1.9 Say with how many equal parts I work / are coloured in
- 1.10 Divide the nominator and denominator by the same number
2. 2.1 b and c

- c and e
- a en b

2.4 Not equal parts

- 2.5 (i) $\frac{1}{4}$
- (ii) $\frac{2}{8} / \frac{1}{4}$
- (iii) $\frac{4}{8} / \frac{1}{2}$
- (iv) $\frac{6}{8}$
- (v) $\frac{1}{2}$
- (vi) $\frac{1}{8}$
- (vii) $\frac{2}{10} / \frac{1}{5}$
- (viii) $\frac{4}{10} / \frac{2}{5}$
- (ix) $\frac{3}{10}$
- (x) $\frac{2}{5}$
- (xi) $\frac{1}{5}$

ACTIVITY 2

1.

B	8	1	$\frac{1}{8}$	7	$\frac{7}{8}$
C	6	1	$\frac{1}{6}$	5	$\frac{5}{6}$
D	8	1	$\frac{1}{8}$	7	$\frac{7}{8}$
E	3	1	$\frac{1}{3}$	2	$\frac{2}{3}$
F	12	6	$\frac{6}{12} / \frac{1}{2}$	6	$\frac{6}{12} / \frac{1}{2}$
G	16	8	$\frac{8}{16} / \frac{1}{2}$	8	$\frac{8}{16} / \frac{1}{2}$
H	16	4	$\frac{4}{16} / \frac{1}{4}$	12	$\frac{12}{16} / \frac{3}{4}$
I	8	2	$\frac{2}{8} / \frac{1}{4}$	6	$\frac{6}{8} / \frac{3}{4}$
J	12	6	$\frac{6}{12} / \frac{1}{2}$	6	$\frac{6}{12} / \frac{1}{2}$
K	8	2	$\frac{2}{8} / \frac{1}{4}$	6	$\frac{6}{8} / \frac{3}{4}$

Table 8

ACTIVITY 4

1.5 Fractions all equal

- 1.6 $\frac{1}{2} = \frac{2}{4} = \frac{4}{8} = \frac{8}{16}$
- 2. 2.1 $\frac{5}{10}$ 2.6 $\frac{2}{5}$
- 2.2 $\frac{4}{6}$ 2.7 $\frac{3}{9}$
- 2.3 $\frac{8}{10}$ 2.8 $\frac{1}{2}$
- 2.4 $\frac{3}{12}$ 2.9 $\frac{6}{12}$
- 2.5 $\frac{10}{12}$ 2.10 $\frac{6}{9}$
- 3. 3.1 $\frac{12}{21}$ 3.4 $\frac{15}{18}$
- 3.2 $\frac{14}{16}$ 3.5 $\frac{9}{10}$
- 3.3 $\frac{4}{5}$ 3.6 $\frac{21}{27}$
- 4. $\frac{10}{12} = \frac{5}{6} = \frac{2}{3} = \frac{6}{9} = \frac{2}{3} = \frac{4}{6}$
 $\frac{3}{4} = \frac{6}{8} = \frac{8}{10} = \frac{4}{5} = \frac{3}{9} = \frac{6}{20}$