Fractions
Series D – Fractions

Contents

Student book answers ____________________ 1
Assessment ______________________________ 4
Student progress record ____________________ 10
Assessment answers _______________________ 11
Objectives ________________________________ 12

Series Author:
Nicola Herringer

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Series D – Fractions

Page 1

Students should cut strips and place them in paper bag.

Pages 2

Observe students.

Pages 3–4

1a

b

c

d

Pages 5–7

1a 2 out of 8: \(\frac{2}{8}\)

b 3 out of 4: \(\frac{3}{4}\)

c 6 out of 8: \(\frac{6}{8}\)

d 5 out of 7: \(\frac{5}{7}\)

Pages 8–10

1a \(\frac{3}{8}\)

b \(\frac{2}{4}\)

c \(\frac{5}{8}\)

d \(\frac{4}{8}\)

e They are both the same as \(\frac{1}{2}\).

2a \(\frac{1}{4}\) or \(\frac{3}{8}\)

b \(\frac{2}{8}\) or \(\frac{1}{2}\)

c \(\frac{3}{4}\) or \(\frac{4}{8}\)

d \(\frac{1}{2}\) or \(\frac{5}{8}\)
Pages 8–10

2e \( \frac{5}{8} \) or \( \frac{3}{4} \)

f \( \frac{2}{3} \) or \( \frac{3}{8} \)

3a \( \frac{1}{8} \), \( \frac{4}{8} \), \( \frac{3}{8} \), \( \frac{7}{8} \)

b \( \frac{1}{4} \), \( \frac{1}{2} \), \( \frac{5}{8} \), \( \frac{7}{8} \)

4a \( \frac{1}{4} \), \( \frac{3}{4} \)

b \( \frac{1}{8} \), \( \frac{3}{8} \), \( \frac{5}{8} \), \( \frac{7}{8} \)

c They are the same.

Pages 11–12

What to do
Observe students.

Pages 13–14

1a \( \frac{4}{10} \)

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

c \( \frac{1}{5} \)

2a

b

c

d

Pages 15–16

1 quarters; eighths; fifths; tenths

2

3a

b

c

d

e

Page 17

1a \( \frac{2}{3} \)

b \( \frac{2}{5} \)

c \( \frac{5}{8} \)

d \( \frac{9}{10} \)

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

f

2a \( \frac{2}{5} \)

b \( \frac{3}{8} \)

c \( \frac{1}{6} \)

d \( \frac{5}{10} \)

e \( \frac{2}{5} \)

f 0
Series D – Fractions

Page 18

1. $\frac{3}{4}$

2. $\frac{3}{8}, \frac{5}{8}$

3. $\frac{6}{10}$

4. $\frac{1}{6}$

5. $\frac{2}{6}$

6. 5

7. 10
**Fractions**

**Name __________________________**

1. Colour half of each shape:
   - a
   - b
   - c

2. Show the following fractions:
   - a 3 out of 8
   - b 1 out of 4
   - c 2 out of 4

3. Label these fractions:
   - a
   - b
   - c

4. Shade these fractions:
   - a
   - b
   - c

**Skills**

<table>
<thead>
<tr>
<th>Not yet</th>
<th>Kind of</th>
<th>Got it</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Represents common fractions on different models
- Interprets the numerator and denominator of a fraction
Fractions

5 Put a ring around the following:

a  \(\frac{1}{2}\) of the circles

b \(\frac{1}{4}\) of the flowers

6 What fraction of each group has a ring around it?

a

b

7 Use the diagrams to find the fractions of different numbers:

a \(\frac{1}{4}\) of 24 =

b \(\frac{1}{3}\) of 18 =

c \(\frac{1}{8}\) of 16 =

8 Find these amounts in these problems:

a \(\frac{1}{3}\) of all the kids in my class wear a watch. How many wear a watch if there are 24 kids in my class?

b Ben made 30 cookies and gave \(\frac{1}{2}\) away to his friends. How many did he give away?

Skills

<table>
<thead>
<tr>
<th>Skills</th>
<th>Not yet</th>
<th>Kind of</th>
<th>Got it</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finds fractions of a collection of objects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finds a fraction of a whole number</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
9 Label this fraction wall:

1 whole

10 Put these fractions in order from smallest to largest:

a \[
\frac{5}{8} \quad \frac{3}{4} \quad \frac{3}{8} \quad \frac{1}{2}
\]

b \[
\frac{4}{8} \quad \frac{8}{8} \quad \frac{6}{8} \quad \frac{1}{4}
\]

11 Match the equivalent fractions in the top row with the fractions underneath by drawing a line to connect them:

\[
\frac{6}{8} \quad \frac{1}{4} \quad \frac{1}{2} \\
\frac{2}{4} \quad \frac{3}{4} \quad \frac{2}{8}
\]

Skills

<table>
<thead>
<tr>
<th>Skills</th>
<th>Not yet</th>
<th>Kind of</th>
<th>Got it</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orders halves, quarters and eighths</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finds equivalence between halves, quarters and eighths</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1. Shade the fraction strips so that each one matches the fraction or decimal:

   a. \( \frac{7}{10} \)
   b. 0.4
   c. 0.8

2. Complete this number line showing equivalent tenths and decimals:

   0 10 10 10 10

3. Label these models as fractions and as decimals:

   a. Fraction: \( \frac{1}{4} \)  Decimals: 0.25
   b. Fraction: \( \frac{1}{2} \)  Decimals: 0.5
   c. Fraction: \( \frac{3}{4} \)  Decimals: 0.75
   d. Fraction: \( \frac{5}{8} \)  Decimals: 0.625
Types of fractions

4 Shade the number of hundredths on each grid:

<table>
<thead>
<tr>
<th></th>
<th>Fraction</th>
<th>Decimal</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td><img src="image1" alt="fraction" /></td>
<td><img src="image2" alt="decimal" /></td>
</tr>
<tr>
<td>b</td>
<td><img src="image3" alt="fraction" /></td>
<td><img src="image4" alt="decimal" /></td>
</tr>
<tr>
<td>c</td>
<td><img src="image5" alt="fraction" /></td>
<td><img src="image6" alt="decimal" /></td>
</tr>
</tbody>
</table>

Write the number of hundredths shown on each grid as a fraction and a decimal:

5

<table>
<thead>
<tr>
<th></th>
<th>Fraction</th>
<th>Decimal</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td><img src="image7" alt="fraction" /></td>
<td><img src="image8" alt="decimal" /></td>
</tr>
<tr>
<td>b</td>
<td><img src="image9" alt="fraction" /></td>
<td><img src="image10" alt="decimal" /></td>
</tr>
<tr>
<td>c</td>
<td><img src="image11" alt="fraction" /></td>
<td><img src="image12" alt="decimal" /></td>
</tr>
</tbody>
</table>

Skills

<table>
<thead>
<tr>
<th>Skills</th>
<th>Not yet</th>
<th>Kind of</th>
<th>Got it</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uses decimal notation for tenths and hundredths</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finds equivalence between tenths and decimals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finds equivalence between hundredths and decimals</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Adding and subtracting fractions

Name ____________________

1 Add these fractions with the same denominators:

   a \[
   \frac{2}{6} + \frac{3}{6} = \]

   b \[
   \frac{7}{10} + \frac{2}{10} = \]

   c \[
   \frac{5}{8} + \frac{2}{8} = \]

2 Subtract these fractions with the same denominators:

   a \[
   \frac{3}{5} - \frac{2}{5} = \]

   b \[
   \frac{3}{4} - \frac{2}{4} = \]

   c \[
   \frac{2}{3} - \frac{1}{3} = \]

3 Solve these fraction word problems:

   a Three friends split a bag of sweets fairly. What fraction of the bag does each of them take?

   b It’s a hot day. Frank drinks \(\frac{1}{8}\) of a jug of juice; Mary drinks \(\frac{2}{8}\) of it. What fraction of the jug of juice is left?

   c A Eurostar train carriage contains 40 English and French passengers. Three quarters of the passengers are English. How many passengers are French?

Skills

<table>
<thead>
<tr>
<th>Skills</th>
<th>Not yet</th>
<th>Kind of</th>
<th>Got it</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adds fractions with the same denominator</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subtracts fractions with the same denominator</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solve fraction word problems</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Series D – Fractions – Student Progress Record

What went well: ____________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

What I need to improve: _____________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

Name________________________________________ Class_________ Date_________
ASSESSMENT ANSWERS
Pages 4–6

1 Shading may vary.
Sample answers:

a

b

c

2a

b

c

3a \frac{2}{5}

b \frac{3}{5}

c \frac{6}{10}

4a

b

c

5 Answers may vary.
Sample answers:

\begin{array}{c}
a \quad \begin{array}{c}
\includegraphics[width=0.2\textwidth]{a.png}
\end{array}
\end{array}

\begin{array}{c}
b \quad \begin{array}{c}
\includegraphics[width=0.2\textwidth]{b.png}
\end{array}
\end{array}

\begin{array}{c}
c \quad \begin{array}{c}
\includegraphics[width=0.2\textwidth]{c.png}
\end{array}
\end{array}

6a \frac{4}{9}

b \frac{7}{12}

7a 6

b 6

c 2

8a 8

b 15

9

\begin{array}{c|c|c|c|c}
& \frac{1}{2} & \frac{1}{4} & \frac{1}{4} & \frac{1}{4} \\
\\hline
\frac{1}{2} & \frac{1}{2} & \frac{1}{4} & \frac{1}{4} & \frac{1}{4} \\
\frac{1}{4} & \frac{1}{4} & \frac{1}{4} & \frac{1}{4} & \frac{1}{4} \\
\end{array}

10a \begin{array}{c}
\begin{array}{c}
3\ 1\ 5\ 3
\end{array}
\end{array}

b \begin{array}{c}
\begin{array}{c}
8\ 2\ 8\ 4
\end{array}
\end{array}

11

12a

b

c

Page 7–8

1a

b

c

3a \frac{1}{3}

b \frac{5}{8}

c \frac{10}{10}

Page 9

1a \frac{5}{6}

b \frac{9}{10}

c \frac{7}{8}

2a \frac{1}{5}

b \frac{1}{4}

c \frac{1}{3}

3a \frac{1}{3}

b \frac{5}{8}

c \frac{10}{10}

10

\begin{array}{c}
0.1\ 0.3\ 0.5\ 0.7\ 0.9
\end{array}

Series D – Fractions

ASSESSMENT ANSWERS
Pages 4–6

1 Shading may vary.
Sample answers:

\begin{array}{c}
a \quad \begin{array}{c}
\includegraphics[width=0.2\textwidth]{a.png}
\end{array}
\end{array}

\begin{array}{c}
b \quad \begin{array}{c}
\includegraphics[width=0.2\textwidth]{b.png}
\end{array}
\end{array}

\begin{array}{c}
c \quad \begin{array}{c}
\includegraphics[width=0.2\textwidth]{c.png}
\end{array}
\end{array}

5 Answers may vary.
Sample answers:

\begin{array}{c}
a \quad \begin{array}{c}
\includegraphics[width=0.2\textwidth]{a.png}
\end{array}
\end{array}

\begin{array}{c}
b \quad \begin{array}{c}
\includegraphics[width=0.2\textwidth]{b.png}
\end{array}
\end{array}

\begin{array}{c}
c \quad \begin{array}{c}
\includegraphics[width=0.2\textwidth]{c.png}
\end{array}
\end{array}

6a \frac{4}{9}

b \frac{7}{12}

7a 6

b 6

c 2

8a 8

b 15

9

\begin{array}{c|c|c|c|c}
& \frac{1}{2} & \frac{1}{4} & \frac{1}{4} & \frac{1}{4} \\
\\hline
\frac{1}{2} & \frac{1}{2} & \frac{1}{4} & \frac{1}{4} & \frac{1}{4} \\
\frac{1}{4} & \frac{1}{4} & \frac{1}{4} & \frac{1}{4} & \frac{1}{4} \\
\end{array}

10a \begin{array}{c}
\begin{array}{c}
3\ 1\ 5\ 3
\end{array}
\end{array}

b \begin{array}{c}
\begin{array}{c}
8\ 2\ 8\ 4
\end{array}
\end{array}

11

12a

b

c

10

\begin{array}{c}
0.1\ 0.3\ 0.5\ 0.7\ 0.9
\end{array}

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<table>
<thead>
<tr>
<th>Topic</th>
<th>Reference</th>
<th>Strand</th>
<th>Substrand</th>
<th>Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fractions</td>
<td>3F1b</td>
<td>Number</td>
<td>Fractions</td>
<td>Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.</td>
</tr>
<tr>
<td>Fractions</td>
<td>3F1c</td>
<td>Number</td>
<td>Fractions</td>
<td>Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.</td>
</tr>
<tr>
<td>Fractions</td>
<td>3F3</td>
<td>Number</td>
<td>Fractions</td>
<td>Compare and order unit fractions, and fractions with the same denominators.</td>
</tr>
<tr>
<td>Types of Fractions</td>
<td>3F1a</td>
<td>Number</td>
<td>Fractions</td>
<td>Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing 1-digit numbers or quantities by 10.</td>
</tr>
<tr>
<td>Types of Fractions</td>
<td>3F2</td>
<td>Number</td>
<td>Fractions</td>
<td>Recognise and show, using diagrams, equivalent fractions with small denominators.</td>
</tr>
<tr>
<td>Adding and Subtracting Fractions</td>
<td>3F4</td>
<td>Number</td>
<td>Fractions</td>
<td>Add and subtract fractions with the same denominator within one whole (e.g. $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$).</td>
</tr>
</tbody>
</table>