Lesson-8: Fractions

14 Periods (40 minutes each)

Learn Better (Main Coursebook), Stay Ahead (Workbook), Book of Holistic Teaching, Book of Project Ideas, CRM signs, Poster

Animation, Animated Activities, Dictionary, eBook, Explainer Video, HOTS, I Explain, Infographic, Mental Maths, Quiz, Know it Right, Quick Maths, Test Generator

Confirming better: I make new friends by learning about their culture.

Curricular Goals and Objectives (NCF)

To enable the students:

- to understand fractions as parts of a whole.
- to read and write fractions, identifying the numerator and denominator.
- to apply fractions in real-life contexts, such as sharing or dividing objects.
- to develop problem-solving skills by comparing, adding and subtracting fractions.
- to collaborate with peers in solving fraction-related tasks.
- to connect fractions with cultural diversity and real-world experiences.
- to communicate mathematical ideas clearly by explaining fractions and solutions.

Methodology

Period 1

SHOULD DO 5 MIN.

Teacher: Good morning students. How are you today?

Teacher: Today, we will begin a new chapter 'Fractions'. Fractions are parts of a whole. Let us play a quick warm-up game to understand this better.

Teacher: I will say an item and you tell me if it is a whole or a part of a whole.

Teacher: A whole apple?

Teacher: Yes, that is a whole.

Teacher: Half of a *roti*?

Teacher: Correct, that is a part of a whole.

Teacher: A glass filled completely with water?

Teacher: That is a whole.

Teacher: One slice of a papaya?

Teacher: Yes, that is a part. Well done.

Teacher: These parts of a whole are what we call 'fractions'. Let us learn more about them together.

Confirming better

Confirming better I make new friends by learning about their culture. PLH 93

SHOULD DO 5 MIN.

Teacher: Let us start with 'Confirming better' section, given on page 93. Who will read and explain it.

Teacher: Why is it important to learn about someone's culture?

Teacher: Yes, because it shows respect and helps us understand their way of life.

Teacher: Can anyone share something they have learnt about a classmate's culture?

Teacher: That is wonderful. When we learn about each other, we build stronger friendships and a happier classroom.

Teacher: Just like a fraction is a part of a whole, each of us is a special part of this classroom. Let us now continue learning together.

Teacher: We will begin a new chapter, Fractions. I have made a KWL format on the blackboard. Please take out your notebooks and draw the same format in your notebooks.

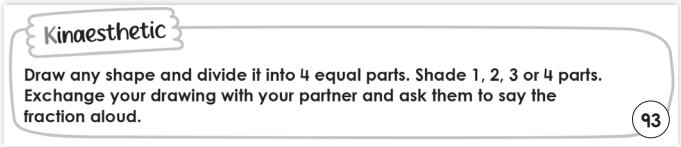
SHOULD DO 10 MIN.

K	W	L

Teacher: Take a few minutes to think and write. If you have any questions, feel free to ask.

Teacher: You all did an amazing work in this activity. Let us move to Re-KAP activities. We will use Kinaesthetic, Auditory and Pictorial activities today to make our learning exciting. Let us start with the Kinaesthetic activity.

Kinaesthetic



MUST DO
10 MIN.

Teacher: Open your books to page 93.

Teacher: Look at the Kinesthetic activity. Draw any shape and divide it into 4 equal parts.

Teacher: Now, shade 1, 2, 3 or all 4 parts.

Teacher: Exchange your drawing with your partner. Ask them to read the fraction aloud.

Teacher: For example, if 1 out of 4 parts is shaded, your partner will say 'one-fourth'.

Teacher: Good work, everyone. This activity helped us see how fractions are shown using pictures.

You may show the **eBook** given on the digital platform.

Auditory

MUST DO
5 MIN.

Teacher: Now, listen carefully as I read out a set of questions.

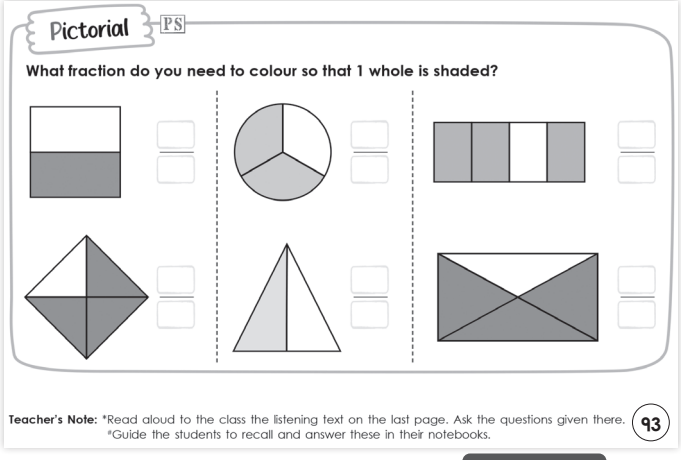
Teacher: Tanya divides an apple into 6 parts. Rakesh eats 3 parts and Suman eats 2 parts.

1. What fraction of the apple did Rakesh eat?
2. What fraction of the apple is left?

Teacher: Great effort, everyone. Now, let us explore the pictorial activity.

You may show the **Dictionary** given on the digital platform.

Pictorial



MUST DO
5 MIN.

Teacher: Let us look at the pictures on the bottom of page 93.

Teacher: What fraction do you need to colour so that 1 whole is shaded? Write the answers in the small boxes next to each shape.

Teacher: Well done, everyone. Let us have a huge round of applause for our hard work. See you in the next class.

Differentiated Activities

110 km/hr

Draw a square and divide it into 8 parts. Shade 5 parts. Write the fraction and explain it.

80 km/hr

Draw a circle and divide it into 4 equal parts. Shade 3 parts. Write the fraction.

40 km/hr

Draw a rectangle. Divide it into 2 parts. Shade 1 part and write the fraction.

Home Task

Draw one star. Divide it into 2 equal parts. Shade one part and write the fraction below it.

Period 2

SHOULD DO
5 MIN.

Teacher: Good morning students. How are you today?

Teacher: Let us begin with a warm-up. I will say a number and you will clap that many times.

Teacher: Ready? Clap 2 times.

Teacher: Now 4 claps. Good. Now, listen carefully.

Teacher: If I cut 1 orange into 2 equal parts, how many parts make the whole orange again?

Teacher: Yes, 2 parts make one whole.

Teacher: Very good. We will learn more about halves, quarters and how to write a fraction today.

You may show the **Explainer Video** given on the digital platform.

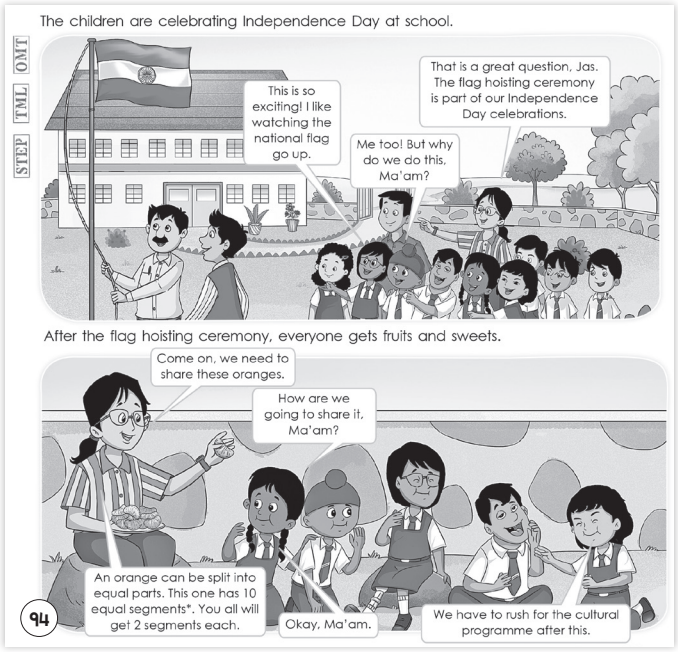
Interacting better

MUST DO
5 MIN.

Teacher: Open your books to the 'Interacting better' section, given on page 94.

Teacher: Take 8 small pieces of paper and make them into paper balls.

Teacher: Now, work with your partner and divide the paper balls into halves and quarters.



MUST DO 15 MIN.

You may show the **Animation** given on the digital platform.

Teacher: Let us now look at a story from your book.

Teacher: Look at the picture story on page 94. Before we read, let me ask you something.

Teacher: What is happening in this scene?

Teacher: Yes, your friends Jas, Ryan, Sam, Lina, Maria, are celebrating Independence Day. What are they doing after the flag hoisting?

Teacher: They are sharing oranges.

Teacher: Now, read the story silently. After reading, we will talk.

Teacher: Done? Good.

Teacher: How many equal parts was the orange divided into?

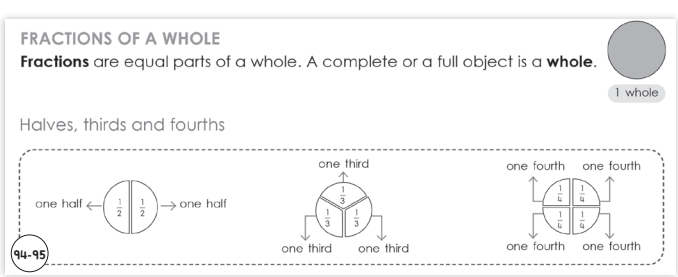
Teacher: Yes, 10 equal parts. How many segments did each child get?

Teacher: Each got 2 segments. That means they got 2 out of 10 parts.

Teacher: So the fraction of orange each student received is $\frac{2}{10}$.

Teacher: This story shows us how fractions help in fair sharing.

Fractions Of A Whole



MUST DO 5 MIN.

Teacher: Let us understand Fractions of a whole.

Teacher: When we divide something into equal parts, each part is called a fraction.

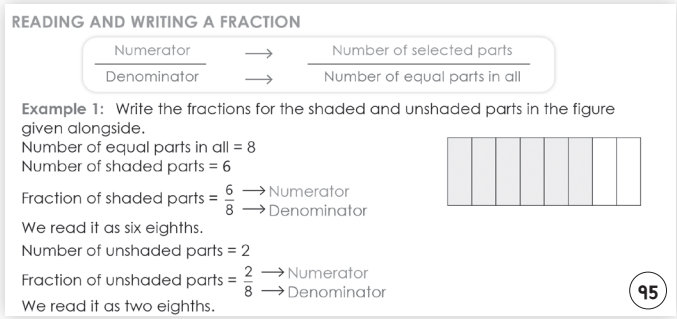
Teacher: Look at the big pink circle. It is shown as 1 whole.

Teacher: If we divide this circle into 2 parts, what is each part called?

Teacher: Yes, one-half. If we divide into 4 equal parts?

Teacher: Each is one-fourth. Very good.

Reading and Writing A Fraction



Teacher: Look at the green and white strip. Count the total number of parts.

MUST DO 10 MIN.

Teacher: There are 8 parts. Out of these, 6 are shaded.

Teacher: So the fraction of shaded parts is $\frac{6}{8}$.

Teacher: The number on top is called the numerator. It tells how many parts are shaded.

Teacher: The number below is the denominator. It tells how many parts the whole is divided into.

Teacher: What is the fraction for the unshaded parts?

Teacher: Yes, $\frac{2}{8}$. You all are doing great.

Teacher: Let us have a huge round of applause for our hard work today. See you in the next class.

Differentiated Activities

110 km/hr

Write the fraction for 5 shaded parts out of 6. Now draw it in your notebook.

80 km/hr

Draw a rectangle. Divide it into 4 parts. Shade 3 parts. Write the fraction.

40 km/hr

Draw a circle. Divide it into 2 parts. Shade 1 part. Write the fraction.

Home Task

Draw a big circle in your notebook. Divide it into 4 equal parts. Shade 3 parts with a colour pencil. Write the fraction for the shaded part below the drawing.

Period 3

SHOULD DO 5 MIN.

Teacher: Good morning students. How are you today?

Teacher: In the last class, we learnt how to read and write fractions. Today, we will solve some exercises to practise what we learnt.

Teacher: Let us begin with a quick food game. I will name a healthy food item and you tell me what fraction I eat if I eat a part of it. Ready?

Teacher: I have one banana. I eat half of it. What fraction did I eat?

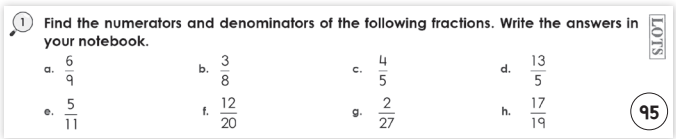
Teacher: Yes, one-half.

Teacher: I have a *chapati*. I divide it into 4 parts and eat 3. What is the fraction?

Teacher: Yes, three-fourths.

Teacher: Now, one apple is cut into 2 parts. I eat both. What fraction is that?

Teacher: That is two-halves or one whole. Well done. Let us start our exercises now.


1 Find the numerators and denominators of the following fractions. Write the answers in your notebook.

a. $\frac{6}{9}$ b. $\frac{3}{8}$ c. $\frac{4}{5}$ d. $\frac{13}{5}$

e. $\frac{5}{11}$ f. $\frac{12}{20}$ g. $\frac{2}{27}$ h. $\frac{17}{19}$

LOTS

95

Teacher: Let us solve Exercise 1, given on page 95. You have to find the numerator and denominator in each fraction.

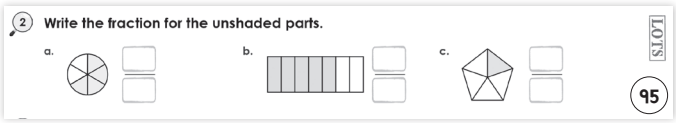
MUST DO

10 MIN.

Teacher: Question (a) is $\frac{6}{9}$. Numerator is 6 and denominator is 9.

Teacher: What is the numerator in $\frac{3}{8}$? Yes, 3. And the denominator? 8.

Teacher: Continue solving questions (c) to (h) in your notebooks.


2 Write the fraction for the unshaded parts.

a. b. c.

LOTS

95

Teacher: Now open Exercise 2. You will look at the pictures and write the fraction for the parts that are not coloured.

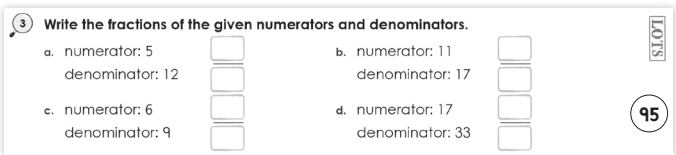
MUST DO

5 MIN.

Teacher: In question (a), there are 6 parts and 2 are unshaded. So, the answer is $\frac{2}{6}$.

Teacher: Complete questions (b) and (c) now.

You may show the **Animated Activities** given on the digital platform.


3 Write the fractions of the given numerators and denominators.

a. numerator: 5
denominator: 12

b. numerator: 11
denominator: 17

c. numerator: 6
denominator: 9

d. numerator: 17
denominator: 33

LOTS

95

Teacher: Let us look at Exercise 3. In each question, the numerator and denominator are already given.

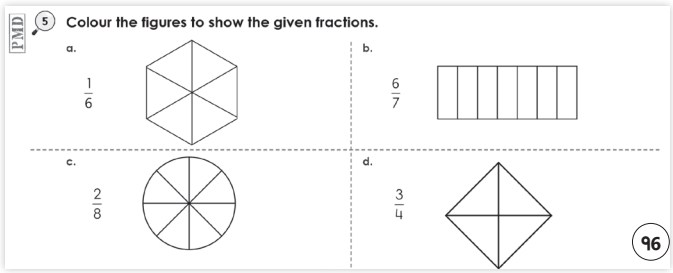
MUST DO

5 MIN.

Teacher: You have to write them as fractions.

Teacher: In question (a), the numerator is 5 and the denominator is 12. So, the fraction is $\frac{5}{12}$.

Teacher: Solve the rest of the questions similarly.


PMD 5 Colour the figures to show the given fractions.

a. $\frac{1}{6}$ b. $\frac{6}{7}$

c. $\frac{2}{8}$ d. $\frac{3}{4}$

96

Teacher Now, form groups of 4. Each group will solve all four questions together.

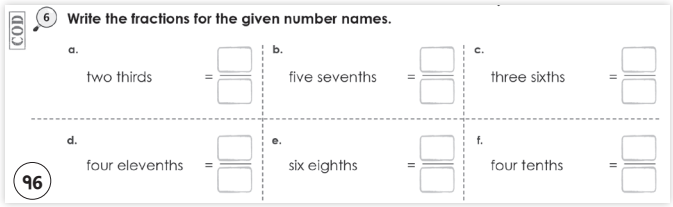
MUST DO

5 MIN.

Teacher: In question (a), you need to colour 1 out of 6 parts. Use colour pencils.

Teacher: Make sure everyone in the group completes each figure. I will come around to see your work.

Teacher: Ask each other and help your group members if needed.


COD 6 Write the fractions for the given number names.

a. two thirds = b. five sevenths = c. three sixths =

d. four elevenths = e. six eighths = f. four tenths =

96

Teacher: Let us solve question (a) of Exercise 6 together.

MUST DO

10 MIN.

Teacher: Who will read the question?

Teacher: Yes, 'Two-thirds' means $\frac{2}{3}$.

Teacher: Now complete (b) to (f) individually.

Teacher: Read each number name carefully and write the correct fraction. Let me know if you need help.

Teacher: Let us have a huge round of applause for our hard work today. See you in the next class.

Differentiated Activities

110 km/hr

Choose any 3 fractions from today's exercises. For each, explain which is the numerator and which is the denominator and draw a shape to show it visually.

80 km/hr

Write the fraction names for $\frac{4}{6}$, $\frac{2}{5}$ and $\frac{3}{8}$.

40 km/hr

Write the numerator and denominator of $\frac{3}{4}$, $\frac{5}{6}$ and $\frac{1}{2}$.

Home Task

Solve Exercise 4 given on page 96 in the Main Coursebook.

Period 4

Teacher: Good morning, students. How are you today?

SHOULD DO

5 MIN.

Teacher: Today, we are going to learn something very interesting. You have seen fractions in circles, squares and other shapes, but now we will learn how to show fractions on a number line.

Teacher: Let us warm up. I will ask a few questions and you guess the fraction.

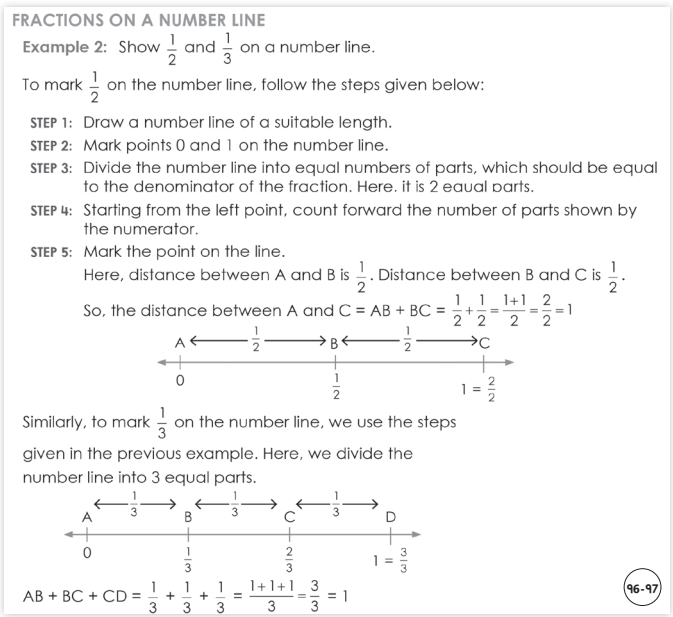
Teacher: I divide a cucumber into 2 equal parts and eat 1. What fraction is that?

Teacher: Yes, one-half.

Teacher: I divide a *roti* into 4 parts and eat 3. What fraction?

Teacher: Three-fourths. Very nice. Now, let us learn something new.

Fractions On A Number Line



FRACTIONS ON A NUMBER LINE

Example 2: Show $\frac{1}{2}$ and $\frac{1}{3}$ on a number line.

To mark $\frac{1}{2}$ on the number line, follow the steps given below:

STEP 1: Draw a number line of a suitable length.

STEP 2: Mark points 0 and 1 on the number line.

STEP 3: Divide the number line into equal numbers of parts, which should be equal to the denominator of the fraction. Here, it is 2 equal parts.

STEP 4: Starting from the left point, count forward the number of parts shown by the numerator.

STEP 5: Mark the point on the line.

Here, distance between A and B is $\frac{1}{2}$. Distance between B and C is $\frac{1}{2}$.

So, the distance between A and C = AB + BC = $\frac{1}{2}+\frac{1}{2}=\frac{1+1}{2}=\frac{2}{2}=1$

A $\xleftarrow{\frac{1}{2}}$ B $\xleftarrow{\frac{1}{2}}$ C

0 $\frac{1}{2}$ $1=\frac{2}{2}$

Similarly, to mark $\frac{1}{3}$ on the number line, we use the steps given in the previous example. Here, we divide the number line into 3 equal parts.

A $\xleftarrow{\frac{1}{3}}$ B $\xleftarrow{\frac{1}{3}}$ C $\xleftarrow{\frac{1}{3}}$ D

0 $\frac{1}{3}$ $\frac{2}{3}$ $1=\frac{3}{3}$

AB + BC + CD = $\frac{1}{3}+\frac{1}{3}+\frac{1}{3}=\frac{1+1+1}{3}=\frac{3}{3}=1$

96-97

Teacher: Everyone please look at the number line on page 96.

MUST DO

10 MIN.

Teacher: This number line starts from 0 and ends at 1. What does it show in between?

Teacher: Let us read the steps together. First, we draw a number line.

(Discuss the steps in detail. Solve the examples on the board.)

Teacher: To show $\frac{1}{2}$, we divide the line into 2 equal parts.

Teacher: If I want to show $\frac{1}{2}$, which point will it be?

Teacher: Yes, exactly in the middle.

Teacher: Now, if we divide the number line into 3 parts and I move 1 step forward, which fraction is that?

Teacher: One-third. Very good.

Teacher: Now, look at the second example and trace with your finger how $\frac{1}{3}$ is shown.

Teacher: Do you need any help understanding how to mark fractions? Raise your hand if yes.

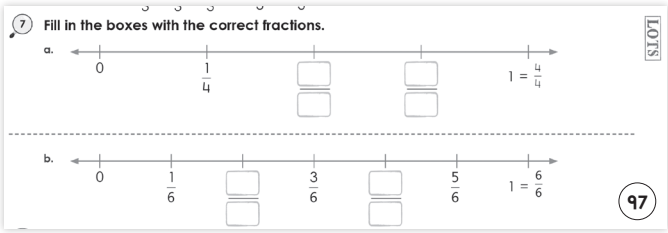
Remembering better

Teacher: Now, look at the 'Remembering better' section.

Teacher: It says we do not write 0 in the denominator. Do you know why?

Teacher: Think: Can we divide something into zero parts?

Teacher: No, because nothing can be divided into zero equal parts. That is why the denominator cannot be zero.



7 Fill in the boxes with the correct fractions.

a. 0 $\frac{1}{4}$ $1=\frac{4}{4}$

b. 0 $\frac{1}{6}$ $\frac{3}{6}$ $\frac{5}{6}$ $1=\frac{6}{6}$

LOTS

97

Teacher: Work in groups of 4 and complete all questions in Exercise 7.

MUST DO

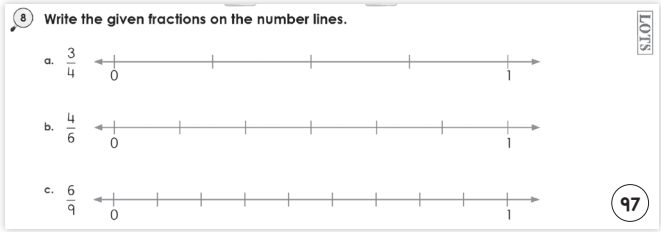
5 MIN.

Teacher: Everyone in the group must solve both (a) and (b).

Teacher: Use your fingers to count the marks on the number line.

Teacher: What comes after $\frac{1}{4}$? Yes, $\frac{2}{4}$.

Teacher: Check all your answers together as a group. I will come around if you need help.



8 Write the given fractions on the number lines.

a. $\frac{3}{4}$ 0 1

b. $\frac{4}{6}$ 0 1

c. $\frac{6}{9}$ 0 1

LOTS

97

Teacher: Now, work with a partner to complete Exercise 8.

MUST DO

10 MIN.

Teacher: In question (a), you have to mark $\frac{3}{4}$ on the number line.

Teacher: First, divide the line into 4 equal parts. Then move 3 steps forward from 0.

Teacher: What would be the last number on each line? Yes, 1.

Teacher: Help your partner if they are confused. Everyone must try marking all three number lines.

Teacher: You all did a wonderful work working in groups, with partners and on your own.

Teacher: Let us have a huge round of applause for our hard work today. See you in the next class.

COULD DO

10 MIN.

Teacher: Take a ruler and draw your own number line.

Teacher: Mark 0 and 1. Now divide it into 6 equal parts and mark $\frac{1}{6}$, $\frac{2}{6}$ and $\frac{5}{6}$.

Teacher: Show your number line to your partner and explain how you did it.

Teacher: You all did a wonderful work working in groups, with partners and on your own.

Teacher: Let us have a huge round of applause for our hard work today. See you in the next class.

Differentiated Activities

110 km/hr

Draw a number line and mark $\frac{2}{3}$, $\frac{3}{4}$ and $\frac{5}{6}$. Label each clearly.

80 km/hr

Draw a number line and mark $\frac{1}{2}$ and $\frac{1}{4}$. Label the points.

40 km/hr

Draw a number line, divide it into 2 parts and mark $\frac{1}{2}$.

Home Task

Draw a number line. Mark 0 and 1. Divide it into 4 equal parts. Shade and label $\frac{1}{4}$ and $\frac{3}{4}$.

Period 5

SHOULD DO — 5 MIN.

Teacher: Good morning, students. How are you today?

Teacher: Let us begin with a quick warm-up activity to refresh your memory on fractions.

Teacher: I will say a fraction and you tell me if it is greater or smaller compared to another fraction.

Teacher: First, listen carefully: $\frac{1}{4}$ or $\frac{3}{4}$?

Teacher: Yes, $\frac{3}{4}$ is greater than $\frac{1}{4}$ because it has more parts shaded.

Teacher: Now, what about $\frac{2}{8}$ and $\frac{5}{8}$?

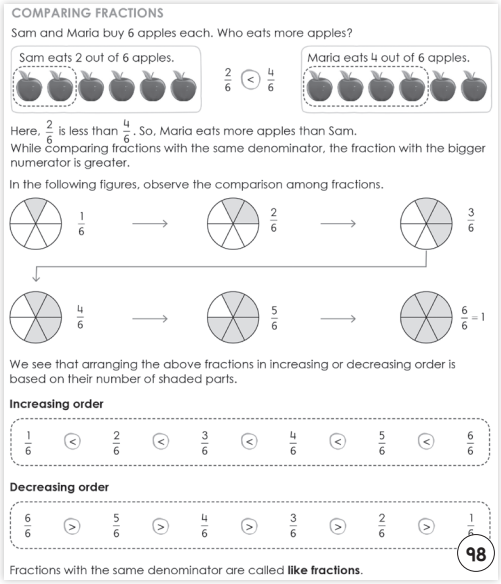
Teacher: Correct, $\frac{5}{8}$ is greater than $\frac{2}{8}$. Great work.

Teacher: Let us try one more: $\frac{4}{6}$ or $\frac{2}{6}$?

Teacher: Yes, $\frac{4}{6}$ is greater than $\frac{2}{6}$ because 4 is a larger numerator.

Teacher: Wonderful. Now, we will continue our learning on comparing fractions and arranging them in order.

Comparing Fractions


COMPARING FRACTIONS

Sam and Maria buy 6 apples each. Who eats more apples?

Sam eats 2 out of 6 apples. $\frac{2}{6} < \frac{4}{6}$ Maria eats 4 out of 6 apples.

Here, $\frac{2}{6}$ is less than $\frac{4}{6}$. So, Maria eats more apples than Sam.
While comparing fractions with the same denominator, the fraction with the bigger numerator is greater.

In the following figures, observe the comparison among fractions.

$\frac{1}{6} \rightarrow \frac{2}{6} \rightarrow \frac{3}{6}$

$\frac{4}{6} \rightarrow \frac{5}{6} \rightarrow \frac{6}{6} = 1$

We see that arranging the above fractions in increasing or decreasing order is based on their number of shaded parts.

Increasing order

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

Decreasing order

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

98

Fractions with the same denominator are called **like fractions**.

Teacher: Today, we will learn how to compare fractions with the same denominator.

MUST DO — 10 MIN.

Teacher: When the denominators are the same, we compare the numerators. The fraction with the larger numerator is greater.

Teacher: For example, let us compare the fractions $\frac{2}{6}$ and $\frac{5}{6}$.

Teacher: Which fraction is greater?

Teacher: Yes, $\frac{5}{6}$ is greater because the numerator 5 is larger than 2.

Teacher: Can anyone tell me another example where the denominators are the same?

Teacher: Yes, let us look at $\frac{4}{8}$ and $\frac{6}{8}$. Which one is greater?

Teacher: Exactly. $\frac{6}{8}$ is greater because 6 is larger than 4.

Teacher: So, when comparing fractions with the same denominator, the fraction with the larger numerator is always greater.

Teacher: Now, let us look at more examples in your books and practice ordering fractions.

(Discuss more examples with the students.)

You may show the **Know it Right** given on the digital platform.

Teacher: Now, let us do something creative and fun to further understand comparing and ordering fractions.

COULD DO — 10 MIN.

Teacher: Take a piece of paper and draw a *chapati*. Divide it into equal parts.

Teacher: Choose any number of parts to shade in and then write the fraction for the shaded part.

Teacher: Afterward, compare your fraction with your partner's and decide who has the larger fraction.


9 Compare using > or <.

a. $\frac{7}{9} \bigcirc \frac{3}{9}$ b. $\frac{5}{11} \bigcirc \frac{9}{11}$ c. $\frac{7}{16} \bigcirc \frac{11}{16}$ d. $\frac{20}{27} \bigcirc \frac{18}{27}$

98

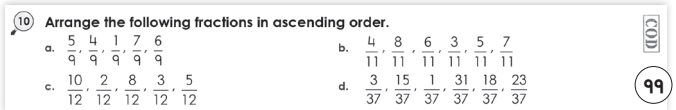
Teacher: Now, open your books to Exercise 9.

MUST DO — 5 MIN.

Teacher: In question (a), compare $\frac{7}{9}$ and $\frac{3}{9}$. Both have the same denominator. Which is greater?

Teacher: $\frac{7}{9}$, because 7 is more than 3.

Teacher: Now try (b), (c) and (d) on your own. I will walk around and help if needed.


10 Arrange the following fractions in ascending order.

a. $\frac{5}{9}, \frac{4}{9}, \frac{1}{9}, \frac{7}{9}, \frac{6}{9}$ b. $\frac{4}{11}, \frac{8}{11}, \frac{6}{11}, \frac{3}{11}, \frac{5}{11}, \frac{7}{11}$

c. $\frac{10}{12}, \frac{2}{12}, \frac{8}{12}, \frac{3}{12}, \frac{5}{12}$ d. $\frac{3}{37}, \frac{15}{37}, \frac{1}{37}, \frac{31}{37}, \frac{18}{37}, \frac{23}{37}$

COD

99

Teacher: Let us now arrange fractions in ascending order.

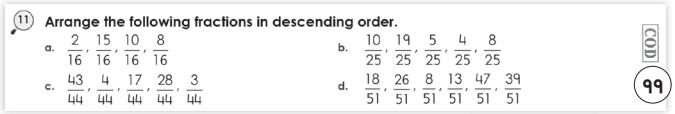
MUST DO — 5 MIN.

Teacher: Question (a) has $\frac{5}{9}$, $\frac{4}{9}$, $\frac{1}{9}$, $\frac{7}{9}$, $\frac{6}{9}$. What do we look at first?

Teacher: The denominators – all are the same. So we sort by numerators.

Teacher: Which is the smallest? Yes, $\frac{1}{9}$. Then $\frac{4}{9}$, $\frac{5}{9}$, $\frac{6}{9}$, and $\frac{7}{9}$.

Teacher: Now solve question (b) the same way with your partner.



Teacher: Now, we will practise arranging fractions in descending order.

MUST DO

5 MIN.

Teacher: Let us try question (a) together: $\frac{2}{16}$, $\frac{15}{16}$, $\frac{10}{16}$, $\frac{8}{16}$.

Teacher: Which is the largest? Yes, $\frac{15}{16}$. Then $\frac{10}{16}$, $\frac{8}{16}$ and $\frac{2}{16}$.

Teacher: Now solve (b) on your own.

Teacher: You all did excellent work comparing and ordering fractions today.

Teacher: Let us have a huge round of applause for our teamwork and learning. See you in the next class.

Differentiated Activities

110 km/hr

Create a fraction race track. Draw a number line from 0 to 1 and place 5 different fractions (same denominator) as checkpoints. Mark which fraction is farthest and explain why it is greater.

80 km/hr

Draw three boxes of the same size. In each, divide into 6 equal parts and shade 2, 4 and 5 parts. Label them with fractions and arrange them in ascending order.

40 km/hr

Draw two rectangles. Divide each into 4 parts. Shade 1 part in one rectangle and 3 parts in the other. Write the fractions and circle the greater one.

Home Task

Solve questions (c) and (d) of Exercise 10 and 11 given page 99 in the Main Coursebook.

Period 6

SHOULD DO

5 MIN.

Teacher: Good morning students. How are you?

Teacher: Let us begin with a quick recall game on comparing fractions from previous period.

Teacher: I will ask you a few questions. Tell me which fraction is greater.

Teacher: First: $\frac{4}{6}$ or $\frac{2}{6}$?

Teacher: Yes, 4 by 6 is greater.

Teacher: Now, $\frac{5}{9}$ or $\frac{3}{9}$?

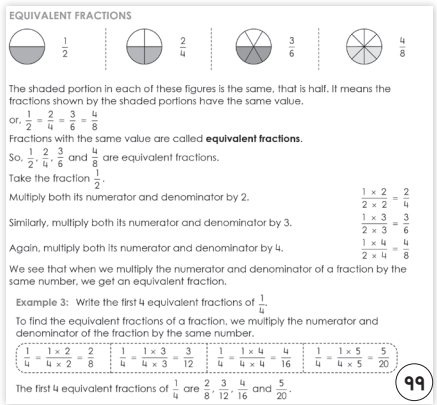
Teacher: Correct, $\frac{5}{9}$ is greater.

Teacher: What about $\frac{2}{5}$ and $\frac{4}{5}$?

Teacher: Yes, $\frac{4}{5}$ is greater.

Teacher: Great work. You remembered that when denominators are the same, we compare numerators. Now, we will learn a new topic called equivalent fractions.

Equivalent Fractions



Teacher: Everyone, please open your books to page 99 and look at the shaded diagrams.

MUST DO

5 MIN.

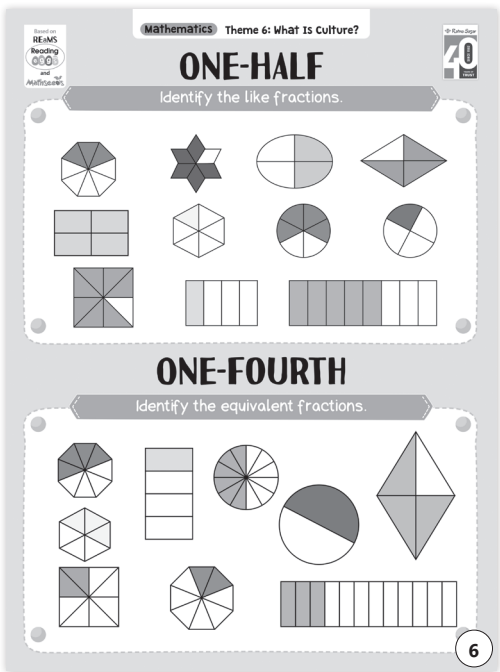
Teacher: What do you notice about the fractions 1 by 2, 2 by 4, 3 by 6 and 4 by 8?

Teacher: Yes, all of them show the same shaded portion.

Teacher: That means they are equal in value. These are called equivalent fractions.

Teacher: We can find equivalent fractions by multiplying the numerator and denominator by the same number.

Poster



Teacher: Now let us work in pairs. Look at the poster.

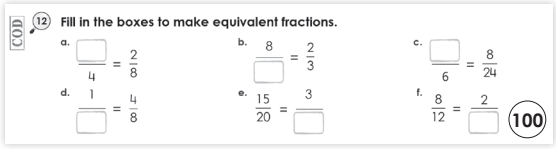
MUST DO 10 MIN.

Teacher: Circle all the shapes that show one-half. Then circle those that show one-fourth.

Teacher: Which ones have the same shaded portion even though they look different?

Teacher: Yes, those are equivalent fractions.

Teacher: Discuss your answers with your partner.



Teacher: Now we will solve Exercise 12.

MUST DO 5 MIN.

Teacher: Question (a) is box by 4 equals 2 by 8. What number goes in the box?

Teacher: We know 2 times 2 is 4 and 4 times 2 is 8. So the missing number is 1.

Teacher: Solve questions (b) and (c) in your notebook. I will help if needed.

COD 13 **Find 4 equivalent fractions for the following. Write them in your notebook.**

a. $\frac{1}{6}$ b. $\frac{2}{3}$ c. $\frac{6}{7}$

d. $\frac{4}{5}$ e. $\frac{7}{9}$ f. $\frac{5}{10}$

100

Teacher: Let us now practise writing equivalent fractions in Exercise13.

MUST DO 10 MIN.

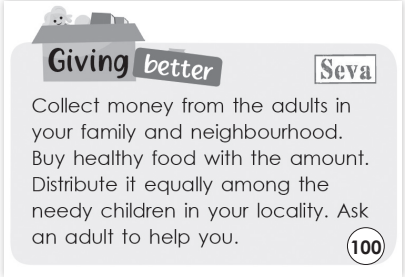
Teacher: In question (a), we have 1 by 6. Multiply numerator and denominator by 2, 3, 4 and 5.

Teacher: We get 2 by 12, 3 by 18, 4 by 24 and 5 by 30.

Teacher: Solve (b) and (c) similarly in your notebook. Ask if you need help.

You may show the **I Explain** given on the digital platform.

Giving better



Teacher: Everyone please look at the 'Giving better' section. Who will read and explain it?

SHOULD DO 5 MIN.

Teacher: Yes, it says to collect money and buy healthy food to share equally with those in need.

Teacher: This teaches us about sharing fairly like using fractions in real life.

Teacher: You may talk to your parents about how you can do this at home.

Teacher: Let us have a huge round of applause for our teamwork. See you in the next class.

You may show the **Infographic** given on the digital platform.

Differentiated Activities

110 km/hr

Write the first 4 equivalent fractions for $\frac{3}{5}$. Show your working using multiplication.

80 km/hr

Multiply the numerator and denominator of $\frac{1}{3}$ by 2, 3 and 4. Write the equivalent fractions.

40 km/hr

Write 2 equivalent fractions of $\frac{1}{2}$ by multiplying both numerator and denominator.

Home Task

Solve questions (d) to (f) of Exercises 12 and 13, given on page 100 in the Main coursebook.

Period 7

SHOULD DO 5 MIN.

Teacher: Good morning students. How are you today?

Teacher: Let us begin with a quick warm-up. I will ask a few questions and you tell me which fraction is greater.

Teacher: Which is greater: $\frac{4}{6}$ or $\frac{2}{6}$?

Teacher: Yes, $\frac{4}{6}$ is greater.

Teacher: Now, $\frac{5}{9}$ or $\frac{3}{9}$?

Teacher: Correct, $\frac{5}{9}$ is greater.

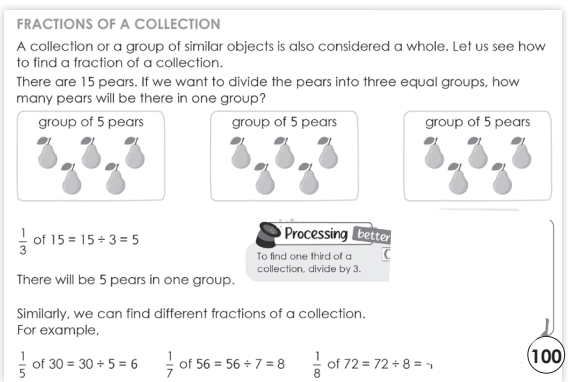
Teacher: What about $\frac{2}{5}$ and $\frac{4}{5}$?

Teacher: Yes, $\frac{4}{5}$ is greater.

Teacher: Excellent. You remembered that when the denominators are the same we compare the numerators. Let us now learn how to find a fraction of a group and how to add fractions.

You may show the **Quick Maths** given on the digital platform.

Fractions of Collection



Teacher: Please open your books to page 100 and look at the pears in the image.

MUST DO 10 MIN.

Teacher: How many pears are there in total?

Teacher: Yes, 15 pears.

Teacher: If we divide 15 pears equally into 3 groups, how many pears will be in each group?

Teacher: Yes, 5. That means $\frac{1}{3}$ of 15 is 5.

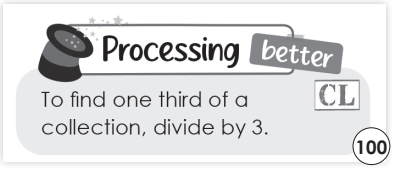
Teacher: Now let us look at the other examples shown.

Teacher: $\frac{1}{5}$ of 30 is 6. Can you tell me how?

Teacher: Yes, 30 divided by 5 is 6.

Teacher: Now discuss with your partner what is $\frac{1}{8}$ of 72?

Processing better



Teacher: Now look at 'Processing better' section. Who will read and explain it?

MUST DO 5 MIN.

Teacher: Yes, to find one third of a collection, we divide by 3.

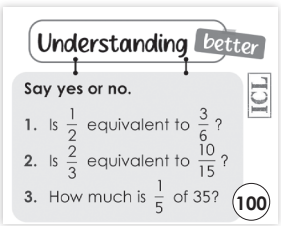
Teacher: Let us try a few more like this. What is $\frac{1}{4}$ of 40?

Teacher: Yes, 10.

Teacher: What is $\frac{1}{2}$ of 18?

Teacher: Correct, it is 9.

Understanding better



Teacher: Please look at the 'Understanding better' section.

Teacher: Let us answer these questions together.

Teacher: Is $\frac{1}{2}$ equal to $\frac{3}{6}$?

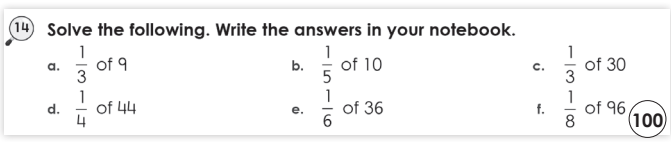
Teacher: Yes, because both represent the same part of a whole.

Teacher: Is $\frac{2}{3}$ equal to $\frac{10}{15}$?

Teacher: Yes, because they are equivalent.

Teacher: What is $\frac{1}{5}$ of 35?

Teacher: Yes, 7. Excellent work.



Teacher: Now let us solve Exercise 14. Teacher: We will solve each question together in your groups. Everyone must solve all questions from (a) to (f).

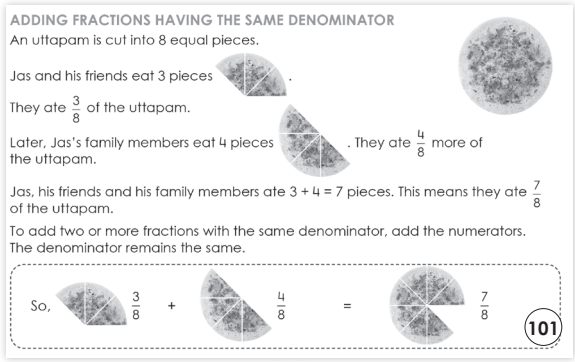
MUST DO 10 MIN.

Teacher: Start with $\frac{1}{3}$ of 9. How do we solve this?

Teacher: We divide 9 by 3, which gives us 3.

Teacher: Try the rest on your own now. Raise your hand if you need any help.

Adding Fractions Having The Same Denominator



Teacher: Let us now learn how to add fractions with the same denominator.

MUST DO 10 MIN.

Teacher: Please open to the next page. Look at the picture of the uttapam.

Teacher: Jas and his friends ate 3 out of 8 pieces. His family ate 4 more pieces.

Teacher: How much did they eat together?

Teacher: $\frac{3}{8}$ plus $\frac{4}{8}$ is $\frac{7}{8}$.

Teacher: When the denominator is the same we just add the numerators.

Teacher: Try this now with your partner add $\frac{2}{6}$ and $\frac{3}{6}$.

Teacher: What do you get?

Teacher: Yes, $\frac{5}{6}$. Let us have a huge round of applause for your teamwork and thinking. See you next class.

Differentiated Activities

110 km/hr

Create your own 'Fraction Fortune Spinner' using a paper circle. Divide it into 6 equal parts. Colour 2 parts red, 1 part blue and the rest green. Now write the fractions of each colour and explain which colour has the greatest fraction.

80 km/hr

Write a short poem using at least 3 fractions.
Example:
'One third of my story is done,
One fourth of my pie is gone,
Half of my journey has just begun.'

40 km/hr

There are 10 flowers. Shade $\frac{1}{2}$ of them in a drawing. Then count how many are shaded and write it as a fraction.

Home Task

Write 3 examples of fractions of collections from your home. For example, if there are 12 pencils and you use 3, write it as $\frac{3}{12}$

Period 8

SHOULD DO — 5 MIN.

Teacher: Good morning, everyone. Let us begin today's class with a quick revision game.

Teacher: I will ask some fraction sums and you need to solve them quickly.

Teacher: What is $\frac{1}{2} + \frac{1}{2}$?

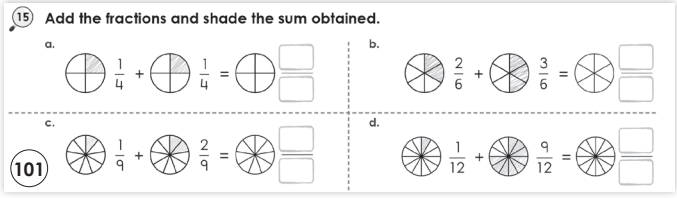
Teacher: Yes, that is $\frac{2}{2}$, which makes 1. Well done.

Teacher: What is $\frac{2}{4} + \frac{1}{4}$?

Teacher: Correct, it is $\frac{3}{4}$. Let us try another one. What is $\frac{3}{6} + \frac{2}{6}$?

Teacher: Yes, $\frac{5}{6}$ is the correct answer. Great work everyone.

Teacher: Now we are ready to practise more sums.



MUST DO — 5 MIN.

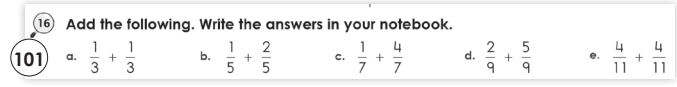
Teacher: Everyone, please open page 101 in your Main Coursebook.

Teacher: Look at Exercise 15. It shows pictures to help us add fractions with the same denominator.

Teacher: Let us do question (a) together. $\frac{1}{4} + \frac{1}{4}$ equals how many fourths?

Teacher: Yes, $\frac{2}{4}$. And you will shade 2 parts out of 4 in the last circle.

Teacher: Complete the rest of the questions the same way.



MUST DO — 10 MIN.

Teacher: Now, let us move to Exercise 16 on the same page.

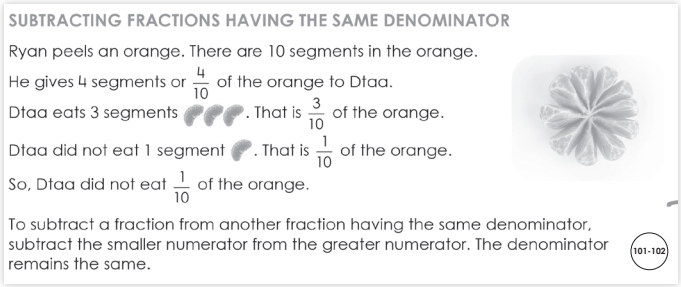
Teacher: In this exercise, we will add fractions that have the same denominator.

Teacher: Look at question (a), $\frac{1}{3} + \frac{1}{3}$. What do you get?

Teacher: Yes, $\frac{2}{3}$.

Teacher: Let us solve all the questions from (a) to (e). You can work with your partner. If anyone needs help, raise your hand.

Subtracting Fractions Having The Same Denominators



MUST DO — 10 MIN.

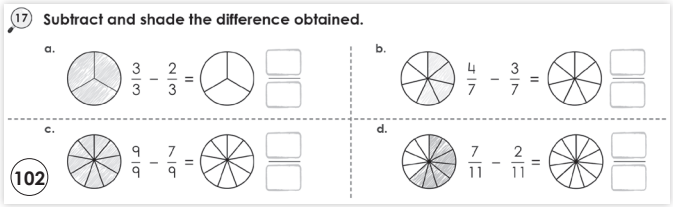
Teacher: Now, look at the explanation at the bottom of page 101.

Teacher: Ryan had 10 segments of an orange. He gave $\frac{4}{10}$ and someone ate $\frac{3}{10}$. One segment was not eaten.

Teacher: That one segment is $\frac{1}{10}$. This means we subtract to find what was left.

Teacher: When we subtract fractions with the same denominator, we only subtract the numerators.

Teacher: For example, $\frac{4}{10} - \frac{3}{10}$ equals $\frac{1}{10}$. Denominator stays the same.



MUST DO — 5 MIN.

Teacher: Now, look at Exercise 17 on page 102.

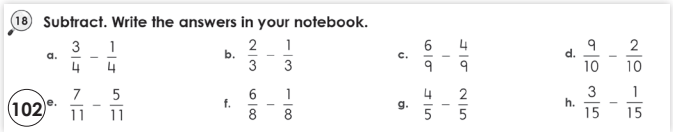
Teacher: These are visual questions. You have to subtract and shade the correct part.

Teacher: Let us do question (a) together. $\frac{3}{3} - \frac{2}{3}$ is what?

Teacher: Yes, it is $\frac{1}{3}$. So you will shade one part in the final circle.

Teacher: Complete questions (b) to (d) using the same steps.

You may show the **Mental Maths** given on the digital platform.



MUST DO — 5 MIN.

Teacher: Now, turn to Exercise 18. We will solve questions (a) to (d).

Teacher: These are simple subtraction questions with the same denominators.

Teacher: For question (a), $\frac{3}{4} - \frac{1}{4}$ is what?

Teacher: Yes, $\frac{2}{4}$. Very good. Continue solving the next three questions

Teacher: Well done, everyone. You all did a fantastic work today. I am so proud of how well you participated in the activities. Keep practising your fractions and I will see you in the next class. Give yourselves a big round of applause.

Differentiated Activities

110 km/hr

Form a story around fraction subtraction. For example, if you had 7 marbles and gave away 3/7, how many do you have left? Create your own fraction story and solve it.

80 km/hr

Solve this: If you eat 3 slices out of 8 and your friend eats 2 slices, how many slices are left? Write the answer as a fraction.

40 km/hr

Colour 8 squares in a row. Shade 6 of them. How many shaded squares will be left if you erase 2? What fraction is left shaded?

Solve questions (e) to (h) of Exercise 18 given on page 102, in the Main Coursebook.

Period 9

SHOULD DO 5 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: Let us begin with a warm-up to recall what we learnt yesterday.

Teacher: I will give you two fractions. You have to quickly tell which is bigger. Ready?

Teacher: $\frac{4}{6}$ or $\frac{3}{6}$?

Teacher: Yes, $\frac{4}{6}$ is bigger because the denominator is same and the numerator is greater.

Teacher: $\frac{1}{5}$ or $\frac{3}{5}$?

Teacher: Correct, $\frac{3}{5}$ is greater.

Teacher: $\frac{7}{10}$ or $\frac{5}{10}$?

Teacher: Good, $\frac{7}{10}$ is greater.

Teacher: $\frac{2}{9}$ or $\frac{6}{9}$?

Teacher: Well done, $\frac{6}{9}$ is greater.

Teacher: Let us now move on to today's lesson.

Example 4: Ruby has 18 lilies. 7 of them are pink. What fraction of pink lilies does Ruby have?

Total number of lilies = 18 Number of pink lilies = 7

Fraction of pink lilies = $\frac{7}{18}$

Ruby has $\frac{7}{18}$ pink lilies.

19 **Solve the following word problems, in your notebook.**

a. Ryan invites 15 friends to his birthday party. 12 of them attend the party. What fraction of his friends attend the party?

b. Reza reads 33 pages of a book that has a total of 40 pages. What fraction of the book is still left to be read?

c. Jas had to do 20 addition questions as homework. He finished 13 questions. What fraction of the questions has he done?

102

MUST DO 10 MIN.

Teacher: Everyone please open page number 102 in your Main Coursebook.

Teacher: Let us solve word problems where we have to find fractions from situations.

Teacher: Question (a) says: Ryan invites 15 friends, 12 attend. What is the fraction of friends who attended the party?

Teacher: Yes, the answer is $\frac{12}{15}$.

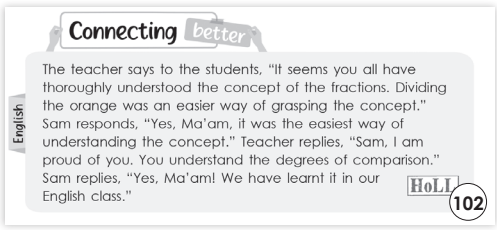
(Discuss the questions in detail.)

Teacher: Now try question (b) on your own. Reza reads 33 pages out of 40. What fraction of the book is left?

Teacher: Very nice. 40 – 33 is 7, so $\frac{7}{40}$ part of the book is left.

Teacher: Let us try the next one and then move to the next section.

Connecting better



MUST DO 5 MIN.

Teacher: Everyone look at the 'Connecting better' section.

Teacher: It says the teacher in English class explained comparison using the orange activity.

Teacher: Can anyone explain why dividing an orange helps to understand fractions?

Teacher: Yes, because we can easily count the pieces and compare.

Teacher: Sam used the word 'easiest'. Can someone tell me what kind of word that is?

Teacher: Yes, it is the superlative form.

Teacher: Where else have you seen such words used?

Teacher: Good, in English when we compare things – like big, bigger, biggest.

Grasping better

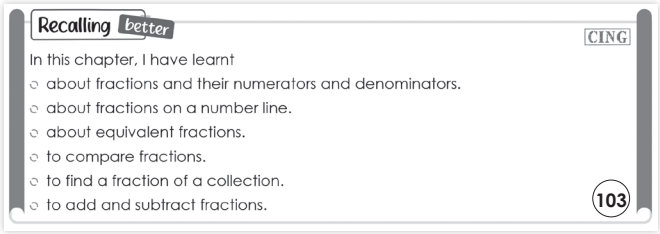
Teacher: Look at the 'Grasping better' section.

Teacher: It gives the word 'segment', we have already discussed this word before in chapter. Who can read and explain what it means?

Teacher: Correct, a segment is one part of a whole, like a piece of an orange.

Teacher: In maths, we use segments when we divide a shape or object into parts.

Recalling better


Recalling better

CING

In this chapter, I have learnt

- about fractions and their numerators and denominators.
- about fractions on a number line.
- about equivalent fractions.
- to compare fractions.
- to find a fraction of a collection.
- to add and subtract fractions.

103

Teacher: Let us recall everything we have learnt in this chapter.

MUST DO

10 MIN.

Teacher: What is a fraction?

Teacher: Yes, it is a part of a whole.

Teacher: What is a Numerator?

Teacher: The top number is the numerator. It tells us how many parts are taken.

Teacher: The bottom number is the denominator. It tells us how many equal parts the whole is divided into.

Teacher: Good. What is an equivalent fraction?

Teacher: Right, fractions that have different numbers but same value like $\frac{1}{2}$ and $\frac{2}{4}$.

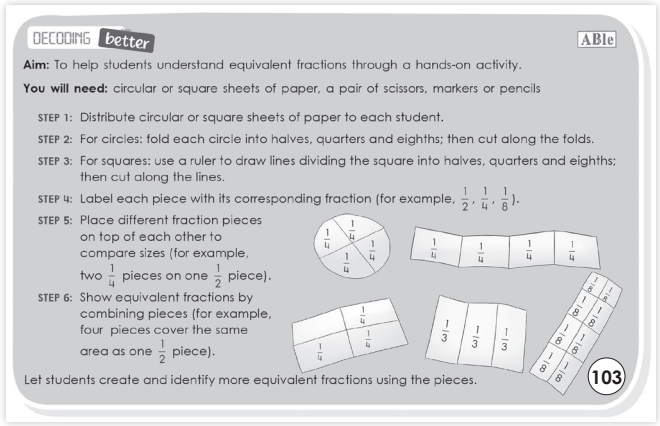
Teacher: How do we find a fraction of a collection?

Teacher: We divide the total items by the number in the denominator.

Teacher: What do we do when we add or subtract fractions with the same denominator?

Teacher: We keep the denominator the same and add or subtract the numerators.

Decoding better


DECODING better

ABle

Aim: To help students understand equivalent fractions through a hands-on activity.

You will need: circular or square sheets of paper, a pair of scissors, markers or pencils

STEP 1: Distribute circular or square sheets of paper to each student.

STEP 2: For circles: fold each circle into halves, quarters and eighths; then cut along the folds.

STEP 3: For squares: use a ruler to draw lines dividing the square into halves, quarters and eighths; then cut along the lines.

STEP 4: Label each piece with its corresponding fraction (for example, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$).

STEP 5: Place different fraction pieces on top of each other to compare sizes (for example, two $\frac{1}{4}$ pieces on one $\frac{1}{2}$ piece).

STEP 6: Show equivalent fractions by combining pieces (for example, four pieces cover the same area as one $\frac{1}{2}$ piece).

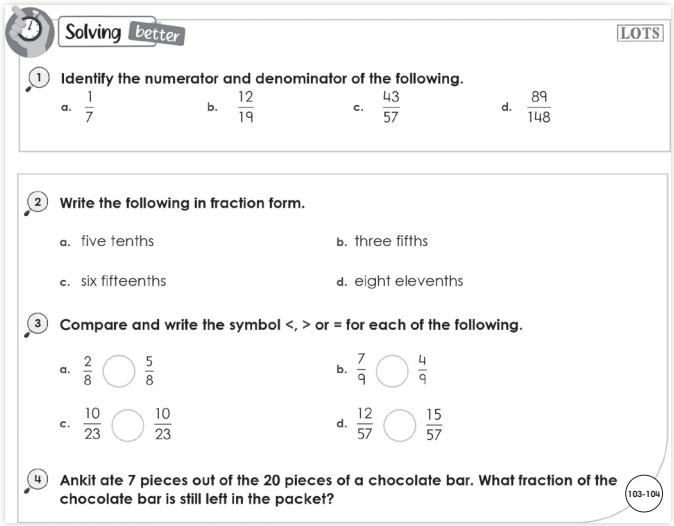
Let students create and identity more equivalent fractions using the pieces.

103

Teacher: Let us do a drawing activity given in 'Decoding better' section. (Guide the students to complete activity.)

MUST DO

5 MIN.


Solving better

LOTS

1. Identify the numerator and denominator of the following.
   a. $\frac{1}{7}$ b. $\frac{12}{19}$ c. $\frac{43}{57}$ d. $\frac{89}{148}$
2. Write the following in fraction form.
   a. five tenths b. three fifths
   c. six fifteenths d. eight elevenths
3. Compare and write the symbol <, > or = for each of the following.
   a. $\frac{2}{8} \bigcirc \frac{5}{8}$ b. $\frac{7}{9} \bigcirc \frac{4}{9}$
   c. $\frac{10}{23} \bigcirc \frac{10}{23}$ d. $\frac{12}{57} \bigcirc \frac{15}{57}$
4. Ankit ate 7 pieces out of the 20 pieces of a chocolate bar. What fraction of the chocolate bar is still left in the packet?

103-104

Teacher: Everyone look at the 'Solving better' section. Let us do question (b) of Exercise 1.

MUST DO

5 MIN.

Teacher: What is the numerator in $\frac{12}{19}$?

Teacher: Yes, 12. And the denominator?

Teacher: 19. Well done.

Teacher: Try $\frac{89}{148}$. What is the numerator?

Teacher: 89. The denominator is 148. Solve questions by your own.

Teacher: Let us now Exercise (2).

Teacher: What is 'five tenths' in fraction form?

Teacher: Yes, $\frac{5}{10}$. What about 'eight elevenths'?

Teacher: Correct, $\frac{8}{11}$. Very good. Solve other questions by your own.

Teacher: Well done, everyone. You all worked hard and participated so well. Let us give ourselves a big round of applause. See you in the next class.

Differentiated Activities

110 km/hr

Draw a scene from your daily life and show any two fractions you observe. Label them. For example, show a water bottle half full ($\frac{1}{2}$) and a chocolate bar with 3 out of 4 pieces eaten ($\frac{3}{4}$).

80 km/hr

Make your own fun word problem on fractions and ask a friend to solve it

40 km/hr

Write any four fractions from your book and identify the numerator and denominator for each.

Home Task

Solve questions (3) and (4) of Solving better given on page 104 in the Main Coursebook.

Period 10

SHOULD DO 5 MIN.

Teacher: Good morning students. How are you today?

Teacher: Let us begin with a warm-up. These are from our previous lessons. Answer quickly.

Teacher: What do we call the number on top of a fraction?

Teacher: That is the numerator. Well remembered.

Teacher: Which number tells us the number of equal parts the whole is divided into?

Teacher: That is the denominator. Very good.

Teacher: What is $\frac{1}{2}$ of 10?

Teacher: It is 5. Excellent.

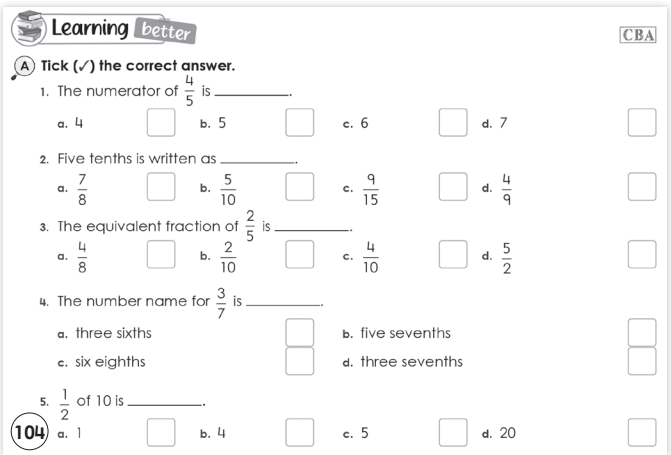
Teacher: What is the fraction of 7 red flowers out of 10 total flowers?

Teacher: It is $\frac{7}{10}$. Perfect.

Teacher: If 4 parts of 8 are coloured, what is the fraction?

Teacher: That is $\frac{4}{8}$. Well done. Let us begin our exercises now.

Learning better



Learning better CBA

A Tick (✓) the correct answer.

1. The numerator of $\frac{4}{5}$ is _____.
   a. 4 b. 5 c. 6 d. 7
2. Five tenths is written as _____.
   a. $\frac{7}{8}$ b. $\frac{5}{10}$ c. $\frac{9}{15}$ d. $\frac{4}{9}$
3. The equivalent fraction of $\frac{2}{5}$ is _____.
   a. $\frac{4}{8}$ b. $\frac{2}{10}$ c. $\frac{4}{10}$ d. $\frac{5}{2}$
4. The number name for $\frac{3}{7}$ is _____.
   a. three sixths b. five sevenths
   c. six eighths d. three sevenths
5. $\frac{1}{2}$ of 10 is _____.
   a. 1 b. 4 c. 5 d. 20

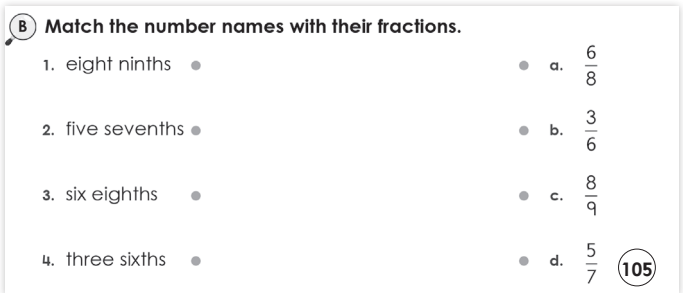
104

MUST DO 5 MIN.

Teacher: Now everyone open to page 104 and look at Exercise A.

Teacher: Let us do question 1 together. The numerator of $\frac{4}{5}$ is the number on top. Yes, it is 4. So the answer is option a.

Teacher: Now complete questions 2 to 5 individually in your notebooks.



B Match the number names with their fractions.

1. eight ninths • • a. $\frac{6}{8}$
2. five sevenths • • b. $\frac{3}{6}$
3. six eighths • • c. $\frac{8}{9}$
4. three sixths • • d. $\frac{5}{7}$

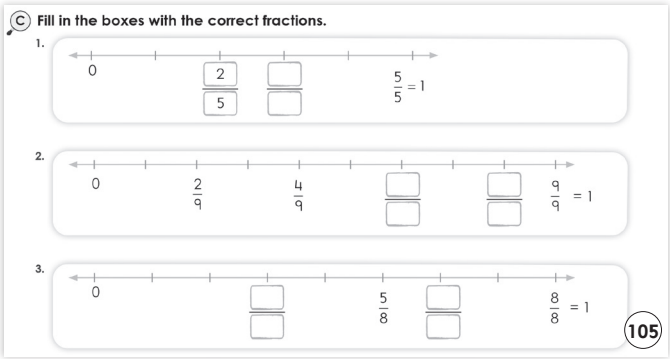
105

MUST DO 5 MIN.

Teacher: Now, let us move to Exercise B. This is matching number names with their correct fractions.

Teacher: I want you to work with your partner for this one. Match all the names with the correct fractions.

Teacher: After you are done, exchange notebooks with your partner and check each other's answers.



C Fill in the boxes with the correct fractions.

1. 0, $\frac{2}{5}$, $\frac{5}{5} = 1$
2. 0, $\frac{2}{9}$, $\frac{4}{9}$, $\frac{9}{9} = 1$
3. 0, $\frac{5}{8}$, $\frac{8}{8} = 1$

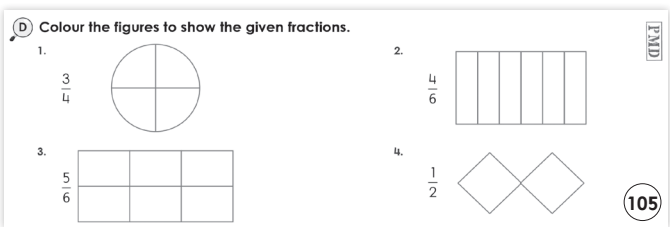
105

MUST DO 10 MIN.

Teacher: Look at Exercise C. These are number lines. We need to place the correct fractions on the line.

Teacher: Let us do the first one together. The number line goes from 0 to $\frac{5}{5}$. $\frac{2}{5}$ is already placed. The missing fractions are $\frac{3}{5}$ and $\frac{4}{5}$.

Teacher: Now divide yourselves in four groups and complete question 2 and 3. Each group will do both number lines. Use colours if needed to highlight fractions.



D Colour the figures to show the given fractions.

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

PMD

105

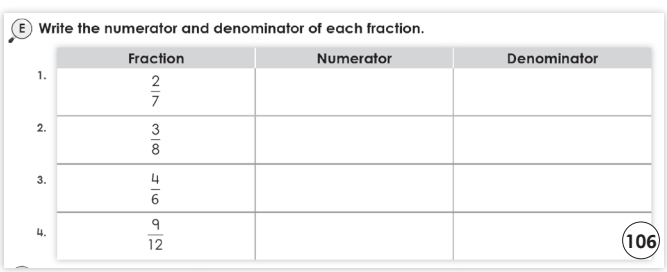
MUST DO 5 MIN.

Teacher: Now we will do Exercise D. This is a colouring task where you show the given fraction.

Teacher: Let us look at question 1. The fraction is 3/4. That means 3 parts out of 4 need to be coloured.

Teacher: Please complete questions 2, 3 and 4 on your own.

Teacher: Now move to Exercise E. identify the numerator and denominator.



E Write the numerator and denominator of each fraction.

	Fraction	Numerator	Denominator
1.	$\frac{2}{7}$		
2.	$\frac{3}{8}$		
3.	$\frac{4}{6}$		
4.	$\frac{9}{12}$		

106

MUST DO 5 MIN.

Teacher: Let us solve question 1 together. The fraction is 2/7. The numerator is 2 and the denominator is 7.

Teacher: Now work with your partner to complete the remaining three questions.

Doubt session

COULD DO
5 MIN.

Teacher: Raise your hand if you have any doubts from today's exercises.
Teacher: Let us clarify together so that everyone understands.
Teacher: Any concept still confusing? Numerator, denominator, number lines or fractions in shapes?
Teacher: Thank you for sharing. I am proud of how confidently you are asking and explaining. Give yourselves a big round of applause.

Differentiated Activities

110 km/hr

Write a word problem on fractions using your favourite snack or fruit. Solve it and exchange with a classmate to solve.

80 km/hr

Write a fraction story using any 3 fractions. Use them in a creative way in a paragraph.

40 km/hr

Look around your classroom. Write any two things that can be divided into equal parts. Write a sentence and the fraction for each. For example: My notebook has 4 sections. I used 2 sections: $\frac{2}{4}$.

Home Task

Create a collage where each part represents a fraction (e.g., $\frac{1}{2}$ flowers, $\frac{1}{4}$ animals). Use construction paper, glue, scissors, magazines to make the collage. Cut out images and glue them onto construction paper to create the collage. Label each section with the corresponding fraction. Prepare to present the collage in the class.

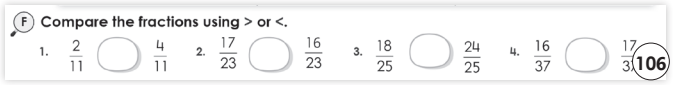
Period 11

SHOULD DO
5 MIN.

Teacher: Good morning students.
I hope you all are doing well.
Teacher: Today, we will begin with a quick game. I will give you five statements and you have to say if they are true or false.

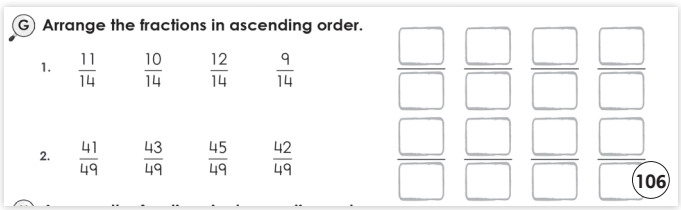
1. One third of 12 is 3
2. $\frac{1}{4}$ is smaller than $\frac{1}{2}$
3. $\frac{2}{5}$ is equal to $\frac{4}{10}$
4. The numerator tells how many parts we are talking about
5. $\frac{3}{6}$ and $\frac{1}{2}$ are equal

Teacher: Well done everyone. You remembered your fraction concepts correctly. Let us move forward now.



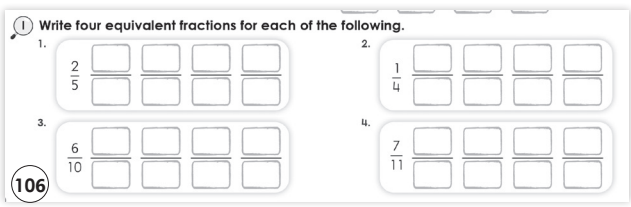
MUST DO
5 MIN.

Teacher: Open your books to page 106. Look at Exercise F.
Teacher: In this exercise, we will compare two fractions using the symbols greater than (>) or less than (<).
Teacher: Let us solve the first one together.
Teacher: Compare $\frac{2}{11}$ and $\frac{4}{11}$.
Teacher: Since the denominators are same, we compare the numerators.
Teacher: 2 is less than 4. So, $\frac{2}{11} < \frac{4}{11}$.
Teacher: Now you will solve the remaining questions on your own.



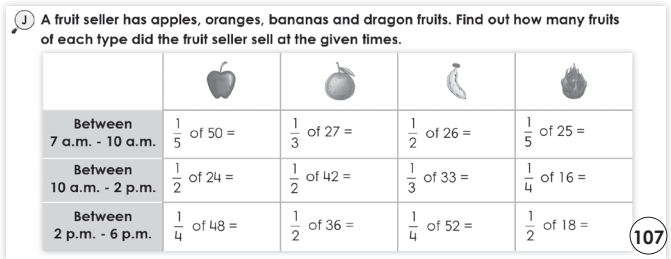
MUST DO
10 MIN.

Teacher: Now move to Exercise G on the same page.
Teacher: You have to arrange the given fractions in ascending order.
Teacher: Try to solve the second question in pairs.
Teacher: Talk to your partner and arrange the fractions from the smallest to the greatest.



MUST DO
10 MIN.

Teacher: Now let us solve Exercise I.
Teacher: You need to write four equivalent fractions for each of the given fractions.
Teacher: Let us try the first one together: $\frac{2}{5}$.
Teacher: Multiply both numerator and denominator by 2, 3, 4 and 5. You will get: $\frac{4}{10}$, $\frac{6}{15}$, $\frac{8}{20}$ and $\frac{10}{25}$.
Teacher: Now try to do the next three on your own.



Teacher: Look at Exercise J now, given on page 107. This is a fun real-life task.

MUST DO
10 MIN.

Teacher: Read the table about the fruit seller.

Teacher: Work in groups and calculate how many fruits were sold at different times.

Teacher: Discuss with your group and help each other complete the table.

Teacher: Well done, everyone. You all did a fantastic work today. I am so proud of how well you participated in the activities. Keep practising your fractions and I will see you in the next class. Give yourselves a big round of applause.

Differentiated Activities

110 km/hr

Design a Fraction Domino Game. Write different fractions on pieces of paper. Match two pieces if they are equal or if one is greater than the other. Play it with a friend.

80 km/hr

Use paper strips to fold and show three equivalent fractions of $\frac{1}{2}$ using different foldings (e.g., fold into 2 parts, 4 parts, 6 parts). Stick them in your notebook and label the fractions.

40 km/hr

Draw three different shapes – a circle, a square and a triangle. Shade $\frac{1}{2}$ of the circle, $\frac{1}{3}$ of the square and $\frac{1}{4}$ of the triangle. Write the fractions next to each shape.

Home Task

Solve Exercise H, given on page 106 in the Main Coursebook.

Period 12

SHOULD DO
5 MIN.

Teacher: Good morning students. I hope you all are doing well.

Teacher: Let us begin with a fun warm-up. I will describe a real-life situation and you will tell me the correct fraction.

Teacher: I ate 1 out of 4 equal pieces of an apple. What fraction did I eat?

Teacher: Yes, $\frac{1}{4}$ is correct.

Teacher: There are 5 pencils. 2 are red. What fraction of the pencils are red?

Teacher: Great. $\frac{2}{5}$ is the right answer.

Teacher: 6 out of 10 balloons flew away. What fraction flew away?

Teacher: Well done. It is $\frac{6}{10}$.

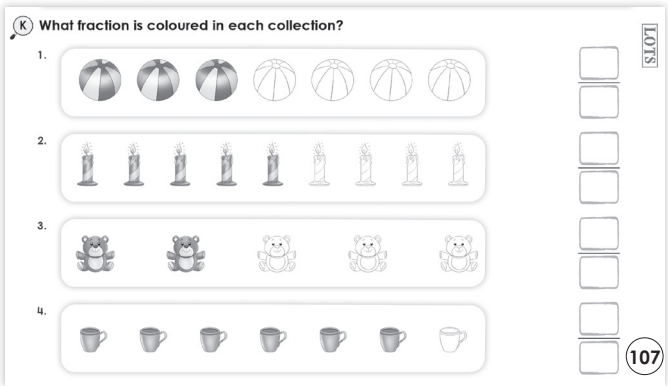
Teacher: You coloured 3 parts out of 6 in a hexagon. What fraction is coloured?

Teacher: That is correct, $\frac{3}{6}$.

Teacher: If 8 cupcakes were on the tray and 4 were eaten, what fraction is left?

Teacher: Perfect. $\frac{4}{8}$ is left.

Teacher: You all are fraction experts now. Let us move ahead.



Teacher: Please open your Main Coursebook to page 107. Look at Exercise K.

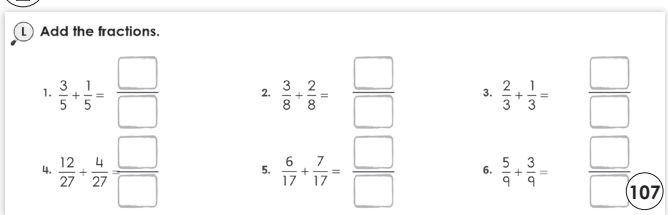
MUST DO
5 MIN.

Teacher: You have to look at each group of objects and write what fraction is coloured.

Teacher: Let us solve the first one together. There are 7 beach balls and 3 of them are coloured. So the fraction is $\frac{3}{7}$.

Teacher: Now solve the remaining questions individually. Look carefully and count both coloured and total items.

You may show the **Quiz** given on the digital platform.



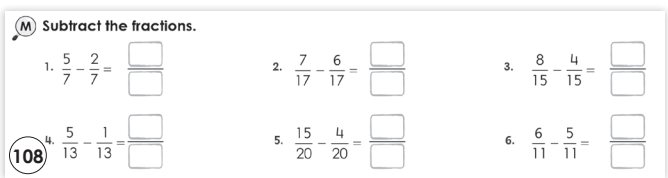
Teacher: Now look at Exercise L. This is about addition of fractions.

MUST DO
10 MIN.

Teacher: You will add like fractions. That means the denominators are the same.

Teacher: Let us solve question 1 together. $\frac{3}{5}+\frac{1}{5}=\frac{4}{5}$

Teacher: Now solve the other questions on your own.



Teacher: Now move to Exercise M. You will work in groups to solve these subtraction problems.

MUST DO
10 MIN.

Teacher: Discuss with your team members and solve all the questions together.

Teacher: Remember, since the denominators are same, you only subtract the numerators.

N **Solve the following word problems, in your notebook.**

1. Ryan is reading a story. The story is of 24 pages. Ryan has read 4 pages. What fraction of the story is still left to be read?
2. There are 24 flowers in a garden. One third of the flowers are marigold. How many marigolds are there in the garden?

108

Teacher: Let us read the first question together. It says: Ryan is reading a story. The story is of 24 pages. Ryan has read 4 pages. What fraction of the story is still left to be read?

MUST DO
5 MIN.

Teacher: Total pages = 24. Pages read = 4. So the pages left = 24 – 4 = 20.

Teacher: So, the fraction left to be read is 20 out of 24, or $\frac{20}{24}$.

Teacher: You may discuss this question with your partner answer and write the solution in the notebook.

Book of Project Ideas

Theme 6: What Is Culture?

Chapter 8: Fractions

Fraction Art

PRO 21st CS

- Create a collage where each part represents a fraction (e.g., $\frac{1}{2}$ flowers, $\frac{1}{4}$ animals).
- Use construction paper, glue, scissors, magazines to make the collage.
- Cut out images and glue them onto construction paper to create the collage.
- Label each section with the corresponding fraction.
- Prepare to present the collage in the class.

9

Teacher: Now it is time for us to present our fraction collage project. I hope you all enjoyed working on your collage at home.

COULD DO
5 MIN.

Teacher: Who would like to come up first and show their collage?

Teacher: While presenting, please tell us what fractions you have used. For example, you can say – half of my collage has flowers, one fourth has animals.

Teacher: Also explain how you made it – did you use paper cuttings, drawings or magazine pictures?

Teacher: Let us all listen carefully and appreciate each other's work.

Teacher: Well done, everyone. I can see a lot of effort and creativity. You have done a wonderful work showing fractions in real life through your art.

Teacher: Let us have huge round of applause. See you in the next class.

Differentiated Activities

110 km/hr

Write a short story using three different fractions (e.g., Reema ate $\frac{2}{5}$ of the cake, gave $\frac{1}{5}$ to her friend and left $\frac{2}{5}$ for later). Add drawings to go with the story.

80 km/hr

Write 2 sentences using fractions. Example: I drank $\frac{1}{2}$ glass of juice. I ate $\frac{3}{4}$ of a sandwich.

40 km/hr

Draw a rectangle. Divide it into 4 equal parts. Shade 1 part and write the fraction. Now do the same with a circle.

Home Task

Solve question 2 of Exercise N given on page 108 in the Main Coursebook.

For the 'Creating better' activity, bring fruits like grapes, oranges, strawberries, apples, small plates and bowls, a serving spoon and salt, chat masala and lemon juice for the next class. Bring 'Little Book' for 'Revising better' activity.

Period 13

SHOULD DO
5 MIN.

Teacher: Good morning students. I hope you all are ready for today's final fun session on fractions.

Teacher: Let us play a riddle round. I will describe something and you have to guess the fraction.

1. I am a fraction. My denominator is 8 and my numerator is 4. What am I? (Answer: $\frac{4}{8}$)
2. Half of a dozen bananas were eaten. What fraction is left? (Answer: $\frac{1}{2}$)
3. I am more than $\frac{1}{4}$ but less than $\frac{1}{2}$. I am made when 2 parts are taken out of 5. What am I? (Answer: $\frac{2}{5}$)
4. What is the equivalent of $\frac{1}{2}$ using 4 as denominator? (Answer: $\frac{2}{4}$)
5. What is $\frac{3}{6}$ as a simpler fraction? (Answer: $\frac{1}{2}$)

Teacher: You all did a great work thinking and answering these riddles. Let us now continue

You may show the **HOTS** given on the digital platform.

Creating better

Creating better

Art I 21st CS

Making Fruit Salad

- Take apples, oranges, papayas and bananas, small plates and bowls, a serving spoon.
- With the help of an adult, cut the fruits into pieces and put them in a big bowl. Add salt, chat masala and lemon juice.
- Make sure you know how many people are sharing the fruit salad. Example: 2 friends, parents, sibling and grandparents. Total: 7 + 1 (you) = 8.
- Place a small plate or bowl in front of every person.
- Use a spoon to serve the fruits in all the bowls/plates.
- Make sure every bowl/plate has one serving, before you serve the second time.
- Keep serving till the big bowl is empty.
- Once everyone has the same amount of fruit pieces, enjoy eating the fruit salad together!

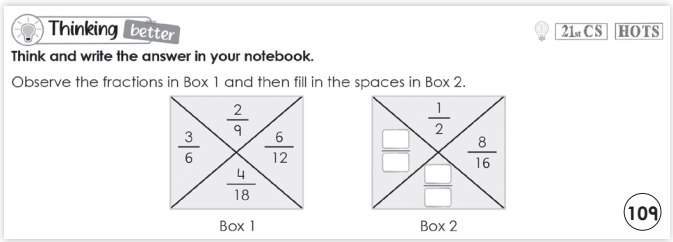
108

Teacher: Open your books to page 108 and look at the 'Creating better' section.

MUST DO 15 MIN.

(Guide the students to complete the activity.)

Thinking better



Teacher: Now turn the page to the 'Thinking better' section.

MUST DO 5 MIN.

Teacher: Look at Box 1.

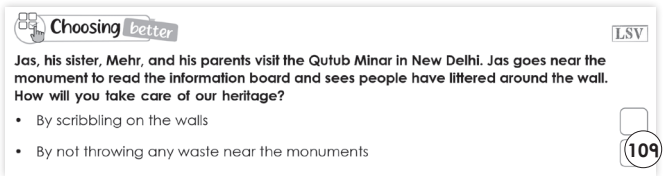
Observe the pattern in the fractions.

Teacher: Now look at Box 2.

Can you find the missing equivalent fractions?

Teacher: Work individually to fill in the missing values.

Choosing better



Teacher: Now, look at the 'Choosing better' section.

MUST DO 5 MIN.

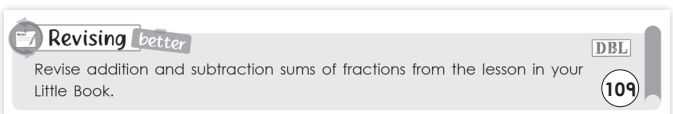
Teacher: Jas visited Qutub Minar with his family and saw that some people had littered around the wall.

Teacher: How do you think we can take care of such monuments?

Teacher: Think and answer, should we scribble on the walls or avoid throwing waste?

Teacher: Yes, not throwing waste near monuments helps preserve our heritage. Discuss your answer with a partner and mark in the book.

Revising better



Teacher: Let us now revise what we have learnt about fractions.

Teacher: Take out your Little Book and write down these questions:

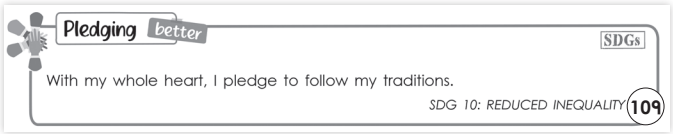
1. Add $\frac{3}{7}$ and $\frac{2}{7}$
2. Subtract $\frac{4}{9}$ from $\frac{7}{9}$
3. Write any two equivalent fractions for $\frac{2}{3}$
4. Compare $\frac{3}{5}$ and $\frac{4}{5}$ using < or >
5. Shade $\frac{1}{2}$ of a square and write the fraction next to it.

Teacher: Solve these questions one by one.

Teacher: If you are confused, raise your hand and I will help you.

Teacher: These questions will help you remember all the fraction operations we have done in class.

Pledging better



Teacher: Now, let us move to 'Pledging better' activity. Who will read and explain it?

MUST DO 5 MIN.

Teacher: What does it mean to follow your traditions?

Teacher: It could be celebrating festivals with your family, speaking your language or helping others in your community.

Teacher: Let us now say this pledge together. Place your right hand on your heart.

Teacher and Students: With my whole heart, I pledge to follow my traditions.

Teacher: Think of one tradition you follow at home.

Teacher: Discuss it with your partner for one minute.

Teacher: Wonderful. Traditions connect us with our family and culture. Let us always value them.

Book of Holistic Teaching

Theme 6: What Is Culture?

Chapter 8: Fractions

FLN HoLL MDA

A English

Circle the words ending with th words.

1. Simran ate one fourth of an apple.
2. Rohan divided a circle into 5 equal parts. Each part is called one fifth.

B Science

During the trip, Sam prepares a first aid kit for a school outing. When her friend gets a minor cut, Sam finds she has used half of the bandages and has one-fourth of the antiseptic wipes left.

What will she use to give her friend first aid?

C Social Studies

Sameer wears red and white clothes for a special school function. The festival falls in the last month of the year. Children wear woollen clothes during this month. Tick (✓) the correct answer.

1. On Christmas
2. On Independence Day

17-18

(Refer to the Book of Holistic Teaching, page 17, 18 under the title 'Fractions.' Complete the activities mentioned in this section and ensure that the students complete them. These activities are designed to enhance their holistic understanding and engagement with the topic. Provide any necessary support and materials to help the students successfully finish the activities.)

COULD DO
5 MIN.

Differentiated Activities

110 km/hr

Write any 2 fractions. Find and write 3 equivalent fractions for each using multiplication. Show them as simplified and visual forms.

80 km/hr

Take a strip of paper into 8 equal parts. Colour 3 parts red, 2 parts blue and the remaining parts green. Write the fraction of each colour. Then, explain which colour covers the largest and smallest part of the strip.

40 km/hr

Complete the sentence: I have _____ pencils. I gave away _____ pencils. So, I gave away _____ fraction of my pencils.

Home Task

Practise the questions discussed in this chapter.

Period 14

SHOULD DO
5 MIN.

Teacher: Good morning students. How are you today?

Teacher: Let us begin with a fun 'Find the Odd One Out' warm-up. I will say a group of fractions. You have to tell which one does not belong and why. Ready?

1. $\frac{1}{2}, \frac{3}{6}, \frac{2}{4}$

Teacher: Yes, they are all equal. None is odd. Good.

2. $\frac{1}{3}, \frac{3}{9}, \frac{4}{6}$

Teacher: Correct. $\frac{4}{6}$ is not equal to the others. Well done.

3. $\frac{5}{10}, \frac{1}{2}, \frac{6}{8}$

Teacher: That is right. $\frac{6}{8}$ is not equal to $\frac{1}{2}$, but the others are.

4. $\frac{2}{5}, \frac{4}{10}, \frac{3}{6}$

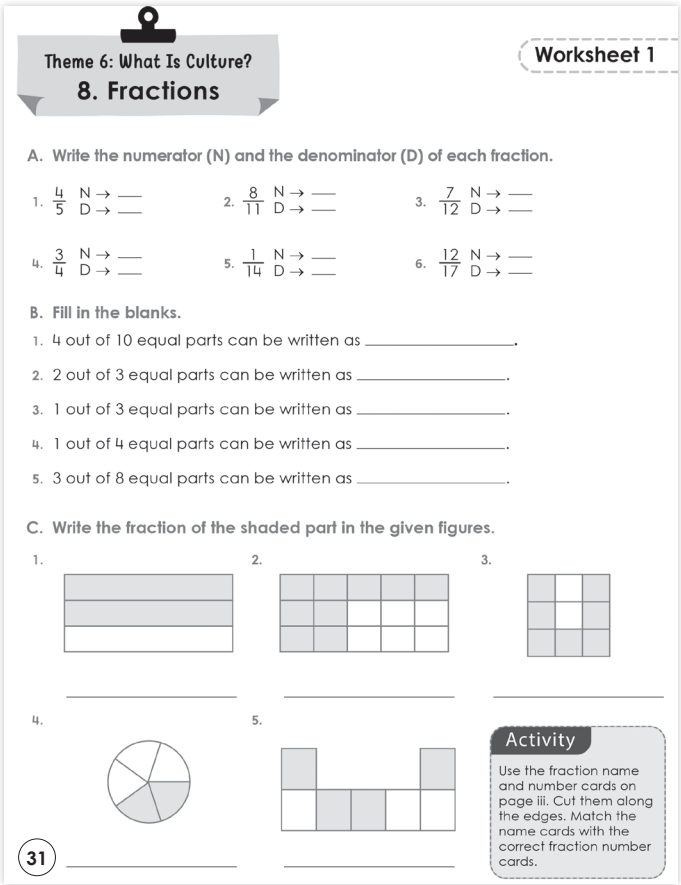
Teacher: Yes, $\frac{3}{6}$ is the odd one here.

5. $\frac{1}{4}, \frac{2}{8}, \frac{3}{12}$

Teacher: Well done. They are all equal. Great work thinking.

Teacher: Excellent. You are getting sharper every day. Let us start with our worksheets now.

Worksheet 1



Theme 6: What Is Culture?

8. Fractions

Worksheet 1

A. Write the numerator (N) and the denominator (D) of each fraction.

1. $\frac{4}{5}$ N → ___ D → ___
2. $\frac{8}{11}$ N → ___ D → ___
3. $\frac{7}{12}$ N → ___ D → ___
4. $\frac{3}{4}$ N → ___ D → ___
5. $\frac{1}{14}$ N → ___ D → ___
6. $\frac{12}{17}$ N → ___ D → ___

B. Fill in the blanks.

1. 4 out of 10 equal parts can be written as _____.
2. 2 out of 3 equal parts can be written as _____.
3. 1 out of 3 equal parts can be written as _____.
4. 1 out of 4 equal parts can be written as _____.
5. 3 out of 8 equal parts can be written as _____.

C. Write the fraction of the shaded part in the given figures.

1. 2. 3. 4. 5.

Activity

Use the fraction name and number cards on page iii. Cut them along the edges. Match the name cards with the correct fraction number cards.

31

MUST DO
15 MIN.

Teacher: Open your Worksheet 1. Let us begin with Exercise A.

Teacher: Who will read and explain it?

Teacher: The numerator is the number on top. It is 4.

Teacher: The denominator is the number below. It is 5.

Teacher: Now complete the rest on your own.

Teacher: Now go to Exercise B. Read the first one: 4 out of 10 equal parts can be written as a fraction.

Teacher: That means 4 parts out of 10. The fraction is $\frac{4}{10}$.

Teacher: Fill in the remaining blanks yourself now.

Teacher: Now let us look at Exercise C. See the first figure.

Teacher: Count the shaded parts, 3 out of 6.

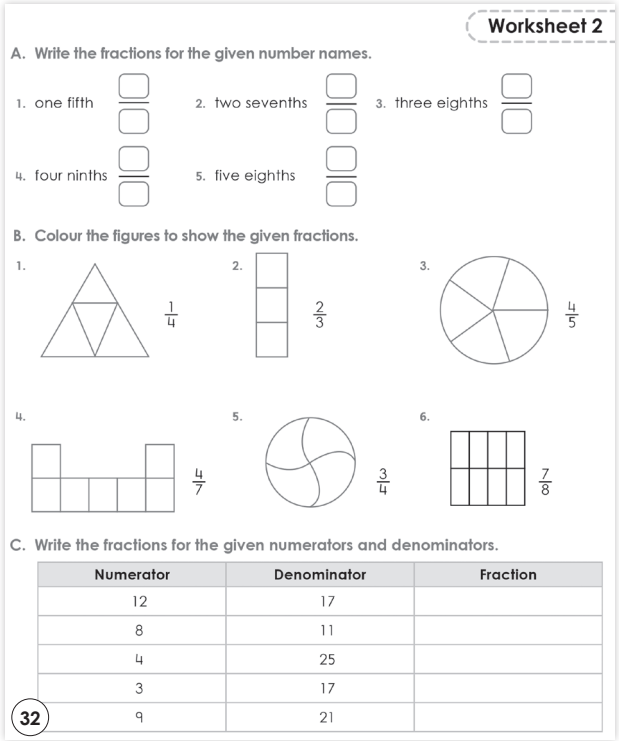
Teacher: So the fraction is $\frac{3}{6}$.

Teacher: Continue with the rest on your own.

(Guide the students to complete a small activity given in the worksheet.)

You may generate additional practice worksheets using the **Test Generator** given on digital platform.

Worksheet 2



Worksheet 2

A. Write the fractions for the given number names.

1. one fifth ☐/☐
2. two sevenths ☐/☐
3. three eighths ☐/☐
4. four ninths ☐/☐
5. five eighths ☐/☐

B. Colour the figures to show the given fractions.

1. $\frac{1}{4}$
2. $\frac{2}{3}$
3. $\frac{4}{5}$
4. $\frac{4}{7}$
5. $\frac{3}{4}$
6. $\frac{7}{8}$

C. Write the fractions for the given numerators and denominators.

Numerator	Denominator	Fraction
12	17	
8	11	
4	25	
3	17	
9	21	

32

MUST DO 15 MIN.

Teacher: Now open Worksheet 2. We will begin with Exercise A.

Teacher: First question, one fifth. What is the fraction?

Teacher: Yes, it is $\frac{1}{5}$.

Teacher: Fill in the rest of the fractions now.

Teacher: Go to Exercise B. The first shape shows $\frac{1}{4}$.

Teacher: Colour 1 part out of 4.

Teacher: Now colour the remaining figures correctly.

Teacher: Let us solve Exercise C. First row gives numerator 12 and denominator 17.

Teacher: So, the fraction is $\frac{12}{17}$.

Teacher: Write the rest of the fractions using the table.

SHOULD DO 5 MIN.

Teacher: Now, let us fill in the last column of the KWL chart.

Teacher: In this column we will write what we have learned in this chapter.

Teacher: Think about the topics, have we learnt and write them in the 'L' column of the chart.

(Wait for students to fill in the chart.)

Teacher: Let us all give a huge round of applause to everyone for their hard work and creativity. Great work, everyone. See you in the next class. Have a wonderful day ahead.

Differentiated Activities

110 km/hr

Design a 'Fraction Card Game'. On one side, write a fraction. On the other, write its picture. Shuffle and match them with a partner. Use at least 5 cards.

80 km/hr

Draw a long rectangle. Divide it into 8 equal parts. Shade 4 parts and label the fraction. Now draw another rectangle of the same length, showing $\frac{2}{4}$. Are they equal?

40 km/hr

Draw a rectangle and divide it into 4 equal parts. Colour 1 part and write the fraction as $\frac{1}{4}$. Now, draw another rectangle and divide it into 4 equal parts. Colour 2 parts and write the fraction as $\frac{2}{4}$. Add both fractions together and write the sum. Discuss with a partner, what do you get when you add $\frac{1}{4}$ and $\frac{2}{4}$?

Home Task

Solve Worksheet 3 given on page 33 in the Main Coursebook.

Learning Outcomes

The students will:

Domain	Learning Outcome
Physical Development	• engage in hands-on activities involving drawing and shading shapes to represent fractions.
Socio-Emotional and Ethical Development	• participate in group activities, showing respect and collaboration with peers. • share examples of cultural practices related to fractions during class discussions.
Cognitive Development	• solve fraction problems involving addition, subtraction and comparison. • represent fractions by drawing and shading shapes correctly in various activities.
Language and Literacy Development	• explain mathematical concepts and articulate fraction-related ideas clearly during discussions.
Aesthetic and Cultural Development	• complete a fraction-based project, correctly labeling and presenting their work. • will relate fractions to cultural practices, sharing examples of how fractions are used in real life.
Positive Learning Habits	• work with a partner to solve fraction-related problems, helping each other when needed. • demonstrate persistence by completing fraction-related tasks on their own.

Starry Knights

Could learners correlate Fractions with daily routine activities they do? which activities did they enjoy the most?

Give yourself a STAR for being a punctual teacher..

Answers

Theme 6: What Is Culture?
Lesson-8: Fractions

Main Coursebook

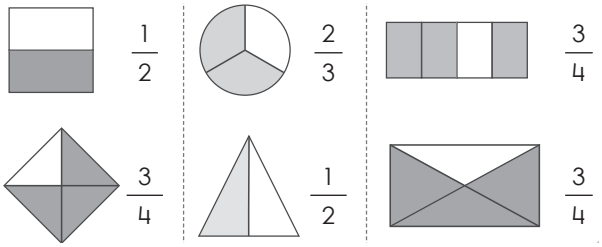
Kinaesthetic

Accept all the relevant responses.

Auditory

1. $\frac{3}{6}$ 2. $\frac{1}{6}$

Pictorial



1. a. $\frac{6}{9}$

Numerator = 6, Denominator = 9

b. $\frac{3}{8}$

Numerator = 3, Denominator = 8

c. $\frac{4}{5}$

Numerator = 4, Denominator = 5

d. $\frac{13}{5}$

Numerator = 13, Denominator = 5

e. $\frac{5}{11}$

Numerator = 5, Denominator = 11

f. $\frac{12}{20}$

Numerator = 12, Denominator = 20

g. $\frac{2}{27}$

Numerator = 2, Denominator = 27

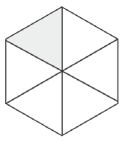
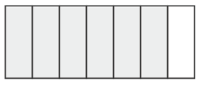
h. $\frac{17}{19}$

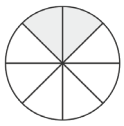
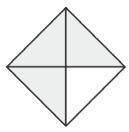
Numerator = 17, Denominator = 19

2. a. $\frac{2}{6}$ b. $\frac{2}{7}$ c. $\frac{1}{5}$

3. a. $\frac{5}{12}$ b. $\frac{11}{17}$ c. $\frac{6}{9}$ d. $\frac{17}{33}$

4. a. $\frac{1}{4}$ b. $\frac{6}{1}$ c. $\frac{2}{7}$ d. $\frac{2}{10}$

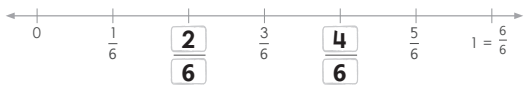
5. a.  b. 

c.  b. 

6. a. $\frac{2}{3}$ b. $\frac{5}{7}$ c. $\frac{3}{6}$ d. $\frac{4}{11}$ e. $\frac{6}{8}$

f. $\frac{4}{10}$

7. a. 

b. 

8. a. $\frac{7}{9} > \frac{3}{9}$ b. $\frac{5}{11} < \frac{9}{11}$

c. $\frac{7}{16} < \frac{11}{16}$ d. $\frac{20}{27} > \frac{18}{27}$

10. a. $\frac{1}{9}, \frac{4}{9}, \frac{5}{9}, \frac{6}{9}, \frac{7}{9}$

b. $\frac{3}{11}, \frac{4}{11}, \frac{5}{11}, \frac{6}{11}, \frac{7}{11}, \frac{8}{11}$

c. $\frac{2}{12}, \frac{3}{12}, \frac{5}{12}, \frac{8}{12}, \frac{10}{12}$

d. $\frac{1}{37}, \frac{3}{37}, \frac{15}{37}, \frac{18}{37}, \frac{23}{37}, \frac{31}{37}$

11. a. $\frac{15}{16}, \frac{10}{16}, \frac{8}{16}, \frac{2}{16}$

b. $\frac{19}{25}, \frac{10}{25}, \frac{8}{25}, \frac{5}{25}, \frac{4}{25}$

c. $\frac{43}{44}, \frac{28}{44}, \frac{17}{44}, \frac{4}{44}, \frac{3}{44}$

d. $\frac{47}{51}, \frac{39}{51}, \frac{26}{51}, \frac{18}{51}, \frac{13}{51}, \frac{8}{51}$

12. a. $\frac{1}{4} = \frac{2}{8}$ b. $\frac{8}{12} = \frac{2}{3}$

c. $\frac{4}{6} = \frac{8}{24}$ d. $\frac{1}{2} = \frac{4}{8}$

e. $\frac{15}{20} = \frac{3}{4}$ f. $\frac{18}{12} = \frac{2}{3}$

13. a. $\frac{1}{6}$ $\frac{2}{12}, \frac{3}{18}, \frac{4}{24}, \frac{5}{30}$

b. $\frac{2}{3}$ $\frac{4}{6}, \frac{6}{9}, \frac{8}{12}, \frac{10}{15}$

c. $\frac{6}{7}$ $\frac{12}{14}, \frac{18}{21}, \frac{24}{28}, \frac{30}{35}$

d. $\frac{4}{5}$ $\frac{8}{10}, \frac{12}{15}, \frac{16}{20}, \frac{20}{25}$

e. $\frac{7}{9}$ $\frac{14}{18}, \frac{21}{27}, \frac{28}{36}, \frac{35}{45}$

f. $\frac{5}{10}$ $\frac{1}{2}, \frac{2}{4}, \frac{3}{6}, \frac{4}{8}$

14. a. $\frac{1}{3}$ of 9 = 3 b. $\frac{1}{5}$ of 10 = 2

c. $\frac{1}{3}$ of 30 = 10 d. $\frac{1}{4}$ of 44 = 11

e. $\frac{1}{6}$ of 36 = 6 f. $\frac{1}{8}$ of 96 = 12

15. a. $\frac{1}{2}$ b. $\frac{5}{6}$ c. $\frac{1}{3}$ d. $\frac{5}{6}$

16. a. $\frac{1}{3} + \frac{1}{3} = \frac{2}{3}$ b. $\frac{1}{5} + \frac{2}{5} = \frac{3}{5}$

c. $\frac{1}{7} + \frac{4}{7} = \frac{5}{7}$ d. $\frac{2}{9} + \frac{5}{9} = \frac{7}{9}$

e. $\frac{4}{11} + \frac{4}{11} = \frac{8}{11}$

17. a. $\frac{3}{3} - \frac{2}{3} = \frac{1}{3}$ b. $\frac{4}{7} - \frac{3}{7} = \frac{1}{7}$

c. $\frac{9}{9} - \frac{7}{9} = \frac{2}{9}$ d. $\frac{7}{11} - \frac{2}{11} = \frac{5}{11}$

18. a. $\frac{3}{4} - \frac{1}{4} = \frac{2}{4} = \frac{1}{2}$ b. $\frac{2}{3} - \frac{1}{3} = \frac{1}{3}$

c. $\frac{6}{9} - \frac{4}{9} = \frac{2}{9}$ d. $\frac{9}{10} - \frac{2}{10} = \frac{7}{10}$

e. $\frac{7}{11} - \frac{5}{11} = \frac{2}{11}$ f. $\frac{6}{8} - \frac{1}{8} = \frac{5}{8}$

g. $\frac{4}{5} - \frac{2}{5} = \frac{2}{5}$ h. $\frac{3}{15} - \frac{1}{15} = \frac{2}{15}$

19. a. $\frac{4}{5}$ b. $\frac{7}{40}$ c. $\frac{13}{20}$

Solving better

1. a. Numerator: 1, Denominator: 7
   b. Numerator: 12, Denominator: 19
   c. Numerator: 43, Denominator: 57
   d. Numerator: 89, Denominator: 148

2. a. $\frac{5}{10}$ b. $\frac{3}{5}$ c. $\frac{6}{15}$ d. $\frac{8}{11}$

3. a. $\frac{2}{8} < \frac{5}{8}$ b. $\frac{7}{9} > \frac{4}{9}$

c. $\frac{10}{23} = \frac{10}{23}$ d. $\frac{12}{57} < \frac{15}{57}$

Learning better

A. 1. a 2. b 3. b 4. d 5. c

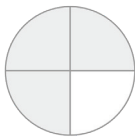
B. 1. Eight ninths = c. $\frac{8}{9}$

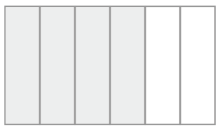
2. Five sevenths = d. $\frac{5}{7}$

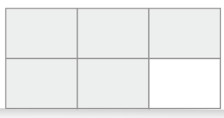
3. Six eighths = b. $\frac{6}{8}$

4. Three sixths = a. $\frac{3}{6}$

C. 1. $\frac{3}{5}$ 2. $\frac{6}{9}$ and $\frac{8}{9}$ 3. $\frac{3}{8}$ and $\frac{5}{8}$

D. 1. 

2. 

3. 

4. 

E. 1. $\frac{2}{7}$

Numerator: 2
Denominator: 7

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

Numerator: 3
Denominator: 8

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

Numerator: 4
Denominator: 6

4. $\frac{9}{12}$

Numerator: 9
Denominator: 12

F. 1. $\frac{2}{11} < \frac{4}{11}$ 2. $\frac{17}{23} < \frac{16}{23}$

3. $\frac{18}{25} < \frac{24}{25}$ 4. $\frac{16}{37} < \frac{17}{37}$

G. 1. $\frac{9}{14}, \frac{10}{14}, \frac{11}{14}, \frac{12}{14}$

2. $\frac{41}{49}, \frac{42}{49}, \frac{43}{49}, \frac{45}{49}$

H. 1. $\frac{7}{8}, \frac{5}{8}, \frac{3}{8}, \frac{1}{8}$

2. $\frac{41}{47}, \frac{33}{47}, \frac{23}{47}, \frac{19}{47}$

I. 1. $\frac{\mathbf{4}}{\mathbf{10}}$ $\frac{\mathbf{6}}{\mathbf{15}}$ $\frac{\mathbf{8}}{\mathbf{20}}$ $\frac{\mathbf{10}}{\mathbf{25}}$

2. $\frac{\mathbf{2}}{\mathbf{8}}$ $\frac{\mathbf{3}}{\mathbf{12}}$ $\frac{\mathbf{4}}{\mathbf{16}}$ $\frac{\mathbf{5}}{\mathbf{20}}$

3. $\frac{\mathbf{12}}{\mathbf{20}}$ $\frac{\mathbf{18}}{\mathbf{30}}$ $\frac{\mathbf{24}}{\mathbf{40}}$ $\frac{\mathbf{30}}{\mathbf{50}}$

4. $\frac{\mathbf{14}}{\mathbf{22}}$ $\frac{\mathbf{21}}{\mathbf{33}}$ $\frac{\mathbf{28}}{\mathbf{44}}$ $\frac{\mathbf{35}}{\mathbf{55}}$

J.

	Apples	Oranges	Bananas	Dragon Fruits
7 a.m. – 10 a.m.	10	9	13	5
10 a.m. – 2 p.m.	12	21	11	4
2 p.m. – 6 p.m.	12	18	13	9

K. 1. $\frac{3}{7}$ 2. $\frac{5}{9}$ 3. $\frac{2}{5}$ 4. $\frac{6}{7}$

L. 1. $\frac{3}{5} + \frac{1}{5} = \frac{4}{5}$

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

3. $\frac{2}{3} + \frac{1}{3} = \frac{3}{3} = 1$

4. $\frac{12}{27} + \frac{4}{27} = \frac{16}{27}$

5. $\frac{6}{17} + \frac{7}{17} = \frac{13}{17}$

6. $\frac{5}{9} + \frac{3}{9} = \frac{8}{9}$

M. 1. $\frac{5}{7} - \frac{2}{7} = \frac{3}{7}$

2. $\frac{7}{17} - \frac{6}{17} = \frac{1}{17}$

3. $\frac{8}{15} - \frac{4}{15} = \frac{4}{15}$

4. $\frac{5}{13} - \frac{1}{13} = \frac{4}{13}$

5. $\frac{15}{20} - \frac{4}{20} = \frac{11}{20}$

6. $\frac{6}{11} - \frac{5}{11} = \frac{1}{11}$

N. 1. $\frac{5}{6}$ 2. 8 marigolds

Thinking better

Think and write the answer in your notebook.

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

Choosing better

- By not throwing any waste near the monuments. ✓

Interacting better

Accept all the relevant responses.

Understanding better (page no - 100)

1. Yes
2. Yes
3. 7

Worksheets

Worksheet 1

A. 1. 4, 5 2. 8, 11 3. 7, 12
4. 3, 4 5. 1, 14 6. 12, 17

B. 1. $\frac{4}{10}$ 2. $\frac{2}{3}$ 3. $\frac{1}{3}$
4. $\frac{1}{4}$ 5. $\frac{3}{8}$

C. 1. $\frac{2}{3}$ 2. $\frac{3}{5}$ 3. $\frac{7}{9}$
4. $\frac{2}{5}$ 5. $\frac{4}{7}$

Worksheet 2

A. 1. $\frac{1}{5}$ 2. $\frac{2}{7}$ 3. $\frac{3}{8}$
4. $\frac{4}{9}$ 5. $\frac{5}{8}$

C. 1. $\frac{12}{17}$ 2. $\frac{8}{11}$ 3. $\frac{4}{25}$
4. $\frac{3}{17}$ 5. $\frac{9}{21}$

Worksheet 3

A. 1. One third 2. Three fifth
3. two sixth 4. One tenth
5. Seven ninth

B. 1. c. 2. d. 3. a.
4. e. 5. b.

C. 1. > 2. < 3. >
4. < 5. >

Book of Holistic Teaching

Developing better

A. Will discuss with designer

B. Sam will use the remaining bandages and antiseptic wipes for first aid.

C. 1

Book of Project Ideas

Making better

Accept all relevant responses.