

NEXT STATION



CLIL BOOK
Ana Elisa Martins

2nd Edition



CONTENTS

	SUBJECT	THEME	LANGUAGE	MY LEARNING GOALS
UNIT 1 FRACTIONS AND PERCENTAGE pages 4-9	Math	Numbers	<ul style="list-style-type: none"> fractions (fraction of a whole, fraction of a set, equivalent fractions, numerator, denominator, one half, one third, one fourth, one fifth, two ninths) percentage She ate $\frac{2}{8}$ of the pizza. 	Calculate percentages using personal strategies, mental math, and / or a calculator
UNIT 2 POLLUTION pages 10-15	Geography	Nature, Environments, and Quality of Life	<ul style="list-style-type: none"> renewable energy, littering, deforestation, recycling, burning of fossil fuels, green area pollution (air pollution, water pollution, land pollution, carbon dioxide, gas, artificial fertilizers, dumping of litter, chemical substances) There are three main forms of pollution. 	Recognize and compare forms of pollution
UNIT 3 BODY FUNCTIONS pages 16-21	Science	Life and Evolution	<ul style="list-style-type: none"> living organisms (cell, tissue, organ, system, organism) respiratory system (nose, mouth, trachea, lungs, bronchi, diaphragm, alveoli) digestive system (esophagus, stomach, small intestine, large intestine) Teeth chew the food and saliva helps dissolve it. 	Understand why respiratory and digestive systems are important for the body
UNIT 4 CITIZENSHIP pages 22-27	History	People and Culture: My Place in the World and My Social Group	<ul style="list-style-type: none"> citizenship (rights, duties, vote, pay taxes, democracy, freedom, equality, fraternity, Code of Hammurabi) Citizens have rights, duties, and responsibilities. 	Associate the concept of citizenship with respect for diversity and human rights
UNIT 5 MARTIAL ARTS pages 28-33	PE	Combat Sports	<ul style="list-style-type: none"> Martial arts (karate, aikido, judo, capoeira, taekwondo, self-defense, competition, mental and spiritual development) Capoeira (<i>roda</i>, <i>berimbau</i>, drums, dance, acrobatics, music) Taekkyeon (low kicks, jump) Martial arts can be practiced for self-defense, competition, or mental and spiritual development. 	Recognize the difference between martial arts and other body practices
UNIT 6 TYPES OF CITIES pages 34-39	Geography	Connections and Scales	<ul style="list-style-type: none"> landscapes (rural, urban) types of cities (emergent, planned) functions of cities (financial center, security, religious center, government administration, manufacturing center, service center) urbanization (employment and education opportunities, social services, urban growth, housing, water supplies, sanitation, health care facilities, living conditions) Cities can develop differently. / London is known for its function as a financial center. 	Identify the types and functions of cities analyzing social, economic, and environmental changes

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UNIT 7 GRAPHS pages 40-45	Math	Statistics and Probability	<ul style="list-style-type: none"> graphs (line graph, bar graph, quantities, pattern, trend, data, values, axis, points) Is the population going to increase or decrease? / This graph shows how data sets vary over time. 	Read, interpret, and create graphs
UNIT 8 A HEALTHY DIET pages 46-51	Science	Life and Evolution	<ul style="list-style-type: none"> food groups (nutrients, nutritional properties) health (muscle, infections, bones, teeth, healthy, illness) vitamins and minerals (diseases, metabolism, calcium, iron, zinc) Protein builds muscle, helps us grow, and fights infections. / Dairy products make our bones and teeth healthy. 	Identify healthy habits
UNIT 9 GYMNASTICS pages 52-57	PE	Gymnastics	<ul style="list-style-type: none"> abilities (do a cartwheel, do a handstand, do a somersault, do a split, juggle) gymnastics (rhythmic, acrobatic) gymnastic equipment (apparatus, rope, hoop, ball, ribbon) movements in gymnastics (cartwheel, backward somersault, straight jump, round off) She / He can do a split. 	Understand basic concepts related to gymnastics
UNIT 10 ART AND TECHNOLOGY pages 58-63	Art	Integrated Arts	<ul style="list-style-type: none"> visual arts (painting, drawing, sculpture, photography), applied arts (architecture, fashion design, wood crafts), performing arts (dance, singing, films), 3D printed art, virtual Internet art and electronic art, Internet art, augmented reality, stop motion Technology has provided artists with new tools for expression. 	Explore different technological resources

ICONS



ZOOM IN

Activities to interpret the picture of the unit opener pages



LISTEN

Audio tracks to practice listening skills



BE



THINK



LEARN



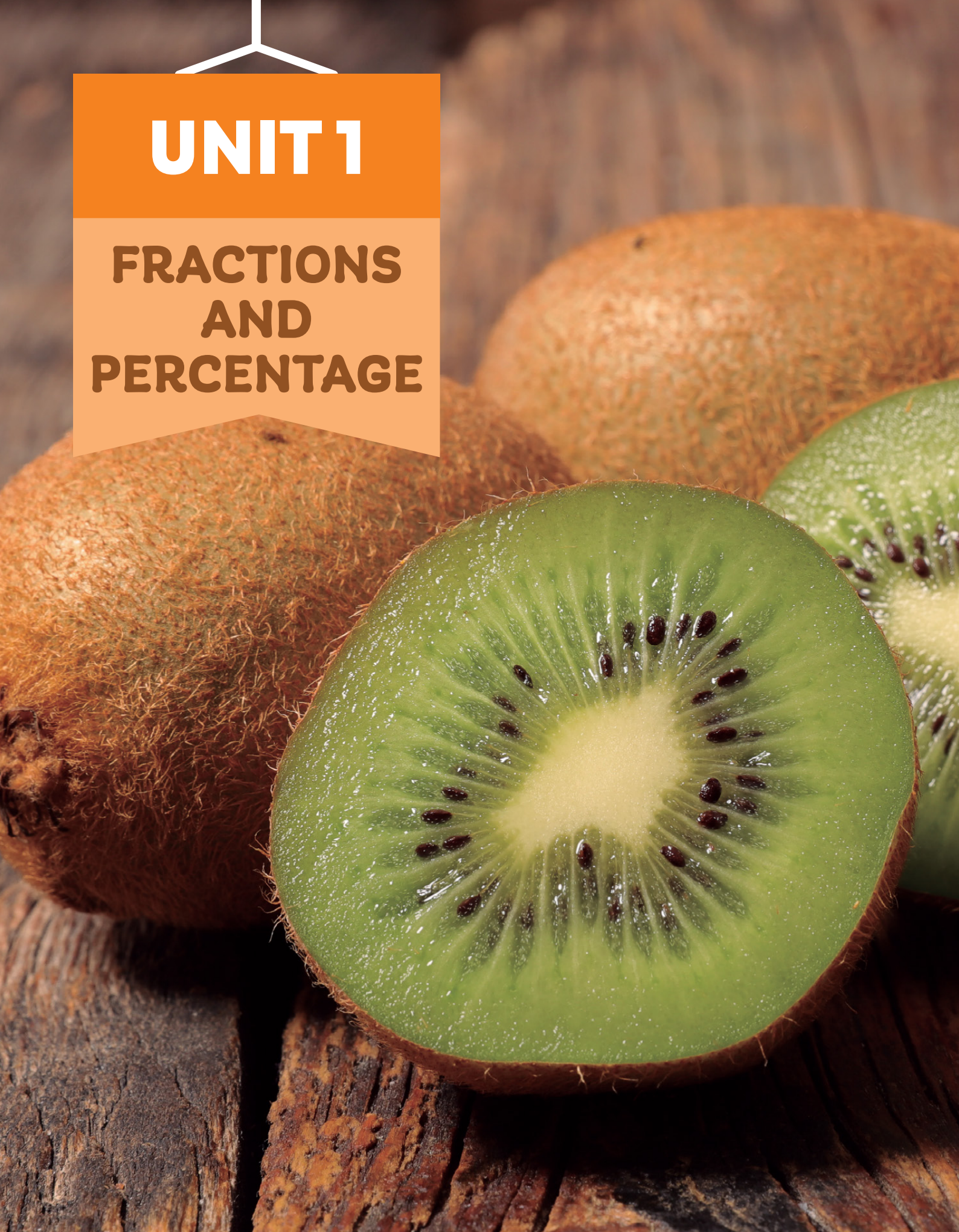
COLLABORATE /
COMMUNICATE

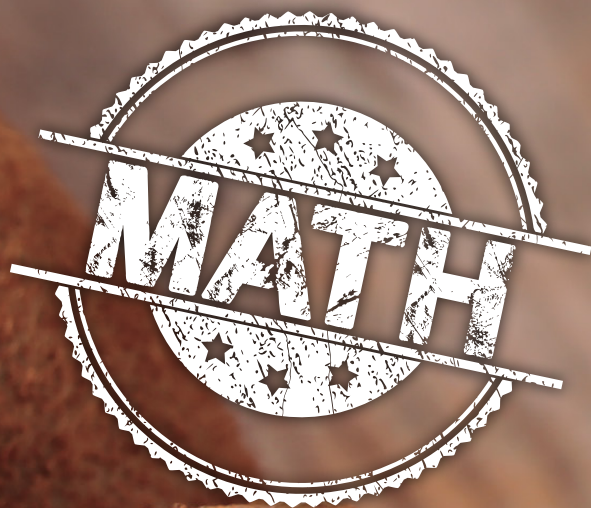


ACT

UNIT 1

FRACTIONS AND PERCENTAGE





New Zealand is one of the world's top kiwifruit exporters.

Did you know that New Zealand's national bird is the kiwi?

Why do you think the fruit is named after this bird?



Look at the picture.

How many whole kiwifruits can you see?

How many kiwifruit halves are there?

Which fraction represents a half?

$\frac{1}{2}$

$\frac{1}{4}$

$\frac{1}{5}$



1 Listen and read.

Fraction of a Whole

Fractions represent the number of **equal parts** of a **whole**.



This is an entire kiwifruit. It is represented by the number **1** (a whole).



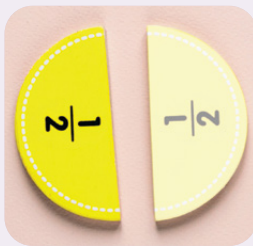
If we divide the fruit into two equal parts, one of these parts is **1/2**.



If we divide the fruit into four equal parts, one of these parts is **1/4**.

The **numerator** shows how many parts we have.
The **denominator** shows how many equal parts the whole kiwifruit was cut into.

$\frac{3}{5}$	← numerator
$\frac{3}{5}$	← denominator



one half



one third



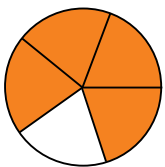
one fourth or one quarter



one fifth

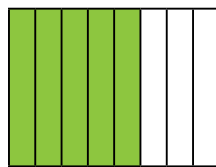
2 Match each fraction with its proper visual representation.

- $\frac{4}{5}$ $\frac{3}{9}$ $\frac{1}{4}$ $\frac{5}{6}$ $\frac{5}{8}$

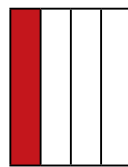


1 four fifths

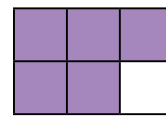
 $\frac{4}{5}$



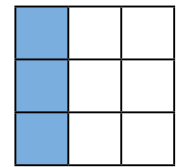
2 five eighths



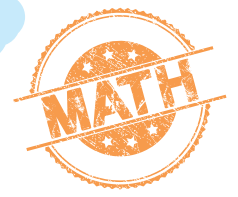
3 one fourth



4 five sixths



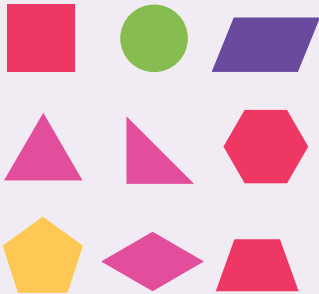
5 three ninths



3 Listen and read.

Fraction of a Set

Fractions are also used to represent **parts of a set**.



Here is a set of 2D shapes.

How many shapes are triangles?

2 out of 9 are triangles. We can write this as a fraction: **$\frac{2}{9}$** (two ninths)

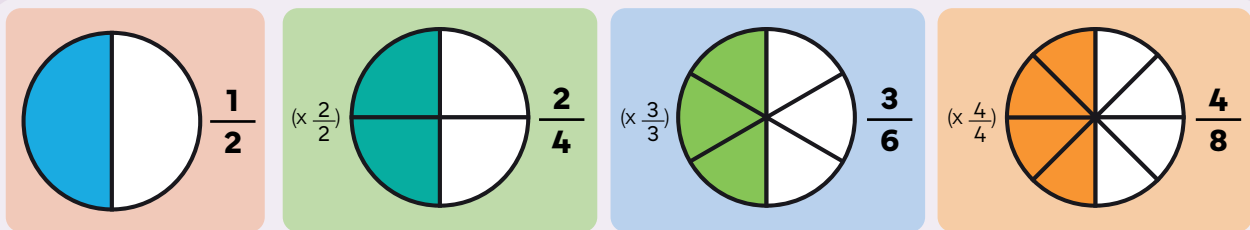
How many shapes have four sides?

4 shapes out of 9 = **$\frac{4}{9}$** (four ninths)

Equivalent Fractions

Some fractions are equivalent.

Equivalent fractions are fractions that represent the same value or proportion of the whole.



In order to get an equivalent fraction, multiply the numerator and denominator by the same number. The fractions above are represented using a circle, also called a **pie chart**.



4 Solve the problems.

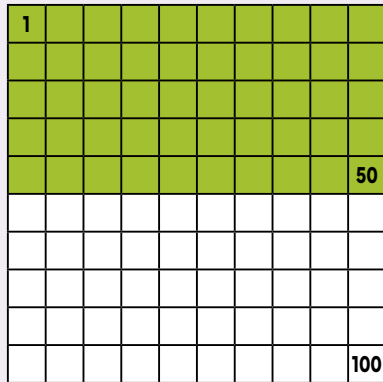
- 1 Katie opened a pizza box. Inside, there was $\frac{6}{8}$ of a pizza. She ate $\frac{1}{2}$ of what was left. How much of the whole pizza did she eat?
- 2 Julia bought 9 boxes and used $\frac{1}{3}$ of them to organize her materials. James bought 6 boxes and used $\frac{2}{3}$ of them. Who used more boxes?
- 3 A student thinks that $\frac{6}{9}$ is more than $\frac{2}{3}$, since 6 and 9 are more than 2 and 3. Is this true or false?



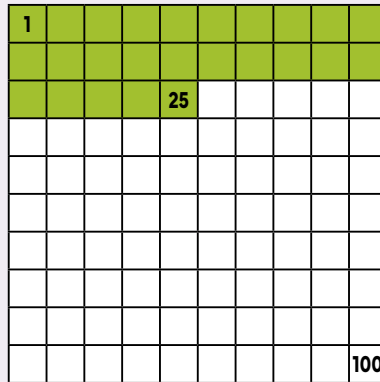
5 Listen and read.

Percentage

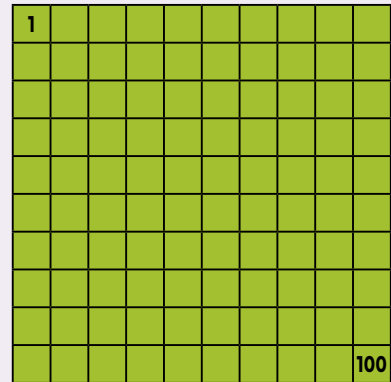
A **percentage** is a number or ratio expressed as a fraction of 100.



50% means 50 parts of 100.



25% means 25 parts of 100.



100% means the whole.

A **percentage** can be expressed as a **fraction** and vice versa.

A half can be written 50% or $\frac{1}{2}$, for example.

If you want to calculate 20% of 80, first you transform the percentage into a fraction and then multiply it by 80.

$$\frac{20}{100} \times \frac{80}{1} = \frac{1600}{100} = 16$$

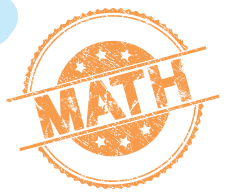
6 Fill out the table.

fraction	15/100		50/100	
percent		25%		100%



7 Solve the problems.

- William's allowance is \$120 per month. He spends 40% on food. How much does he spend on food every month?
- The price of a hat has a 25% discount and is now \$15. What was the original price?



8 You are going to do a survey with your classmates.



1 Create a question. Look at the example:

What is your favorite season?

2 Write three answer options.

1 _____

2 _____

3 _____

3 Ask the question and organize the data.

- How many classmates chose answer 1?

What is the percentage? _____ And the fraction? _____

- How many classmates chose answer 2?

What is the percentage? _____ And the fraction? _____

- How many classmates chose answer 3?

What is the percentage? _____ And the fraction? _____

4 Create a pie chart and label it.

