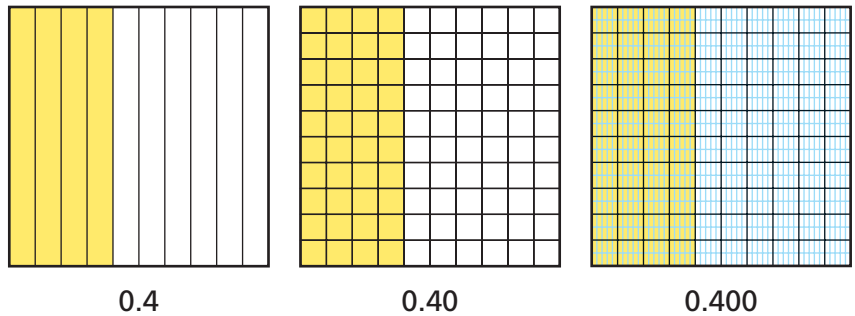


Reading Strategy**Synthesizing**

What did you learn
in this chapter?
Record your
thoughts.

Frequently Asked Questions

- Q:** How are decimals such as 0.4, 0.40, and 0.400 alike? How are they different?
- A:** When you model decimals like 0.4, 0.40, and 0.400 on equal-sized grids, the amount that is coloured is the same for all of them. This means that they are equivalent decimals.



These equivalent decimals have the same value, but they are different because they cannot always be modelled on the same grid.

- You can accurately model 0.4, 0.40, and 0.400 on a thousandths grid.
- You can accurately model 0.4 and 0.40 on a hundredths grid.
- You can accurately model 0.4 on a tenths grid.

Q: How can you compare and order decimals?

A1: You can compare decimals using place value charts.

For example, order 0.341, 0.351, and 0.220 from least to greatest.

Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths
		0	3	4	1

Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths
		0	3	5	1

Compare the numbers going from left to right.

0.341 and 0.351 both have 3 as the tenths digit.

0.351 has 5 as the hundredths digit and 0.341 has 4 as the hundredths digit.

$$0.341 < 0.351$$

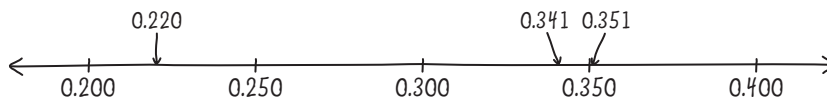
Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths
		0	2	2	0

0.221 has 2 as the tenths digit, but 0.341 and 0.351 have 3 as the tenths digit.

The numbers in order from least to greatest are 0.220, 0.341, and 0.351.

A2: You can compare decimals using benchmarks on a number line.

For example, 0.341 is less than 0.350, and 0.351 is just a little more than 0.350.



The least number, 0.220, is farthest to the left.

The numbers in order from least to greatest are 0.220, 0.341, and 0.351.

Practice



Lesson 1

- 289 318 pennies were used to build a penny pyramid.
 - Model this number on a place value chart.
 - Write this number in words.

Lesson 2

- Alexandria wrote three numbers in expanded form.

$$600\ 000 + 80\ 000 + 2\ 000 + 8$$

$$600\ 000 + 60\ 000 + 9\ 000$$

$$600\ 000 + 80\ 000 + 2\ 000 + 300$$

Write these numbers in standard form. Then arrange them in order from least to greatest.

- Arrange the following numbers in order from least to greatest:
129 124 750 121 236 148 124 113 124 121
 - List three numbers that have six different digits and are between 124 113 and 129 124.

Lesson 4

- In one week, a human breathes about 161 280 times.
 - Write the number of breaths in words.
 - Round this number to the nearest hundred thousand, ten thousand, and thousand.

Lesson 6

- Write each number in standard form.

a)

Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths

b) $3 + 0.2 + 0.08 + 0.001$

- Write each number in words.

a) 0.250 b) 0.009 c) 0.407 d) 1.109

Lesson 7

7. In 2006, for every 1000 people in Canada there were 240 people who were younger than 19 years old.
- a) Colour a thousandths grid to represent this age group.
 - b) Write fractions with denominators of 1000 and 100 to represent the coloured part.
 - c) Write a decimal thousandth and a decimal hundredth to represent the coloured part.



Lesson 8

8. Brandon said that 40 of the 100 jellybeans in a jar are orange. Taylor commented that this is the same as saying that 0.04 of the jellybeans are orange. Is Taylor correct? Explain.

Lesson 9

9. Round each decimal to the nearest hundredth and the nearest tenth.
- a) 0.139 b) 0.591 c) 0.057 d) 7.028
10. 1000 people were surveyed about their favourite ice-cream flavour. The results are shown at the left.
- a) Write a decimal thousandth to represent each flavour.
 - b) Round each decimal to the nearest hundredth.
 - c) In a group of 100 people, about how many might say that chocolate is their favourite flavour?

Favourite Ice-Cream Flavour

Flavour	Number of votes
vanilla	470
chocolate	289
strawberry	98
butter pecan	54
caramel	89

Lesson 10

11. Arrange the numbers in each set in order from least to greatest.
- a) 7.900, 7.990, 7.090, 7.999, 9.700
 - b) 5, 5.05, 5.1, 5.755, 5.20, 5.201

What Do You Think Now?

Look back at **What Do You Think?** on page 39. How have your answers and explanations changed?