

Unit **6**

More Decimal and Fraction Operations

Essential Questions

- How can we represent and multiply or divide with powers of 10?
- How can we use the relationship between multiplication and division to convert between units?
- How can we add and subtract fractions with unlike denominators?



Unit Story: The Monarchs

You can read the Unit Story with your student by visiting the Unit Story page on the Caregiver Hub.



Unit Investigation

Lesson 1 is the Unit Investigation. Students explore and describe the number 1 trillion to build curiosity and apply their own knowledge in a variety of ways. Use the **Caregiver Connection** to help students continue to explore the math they will see in the unit.

Caregiver Connection

Students may enjoy exploring very large numbers in the world around them. Encourage students to reflect or look for places with large quantities of objects, like the number of stars in the sky, the number of grains of sand on the beach, or the number of liters of water in the ocean.

Summary | Lesson 2

You can represent a power of 10 using exponential form. In exponential form, the **base** represents the factor, and the **exponent** indicates how many times the base is used as a factor.

Exponential form	10^{11} base exponent
Multiplication expression	$10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10$
Standard form	100,000,000,000

Try This

Use the information for Problems 1 and 2.

The population of Montana is about 1 million people.

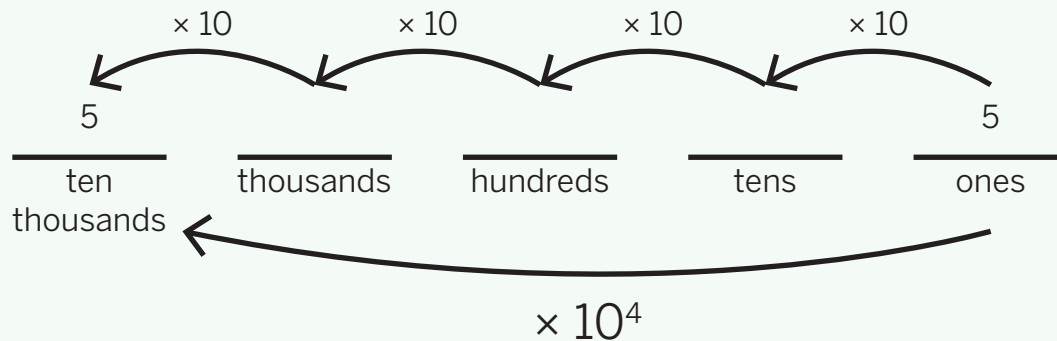
- 1 Write the population of Montana as a multiplication expression.

- 2 Using powers of 10, write a number that is *greater* than the population of Montana.

Summary | Lesson 3

When a number is multiplied by a power of 10, each of its digits shifts to the left. When multiplying a whole number and a power of 10, the number of zeros in the factors equals the number of zeros in the product.

$$5 \times 10^4 = 50,000$$



Try This

For Problems 1–3, write an equivalent expression with a power of 10. Then represent the product as a number in standard form.

Expression	Equivalent expression with a power of 10 in exponential form	Product in standard form
1 $40 \times 10,000$		
2 $30 \times 10 \times 10$		
3 $850 \times 10,000$		

Summary | Lesson 4

When you multiply or divide by powers of 10, each digit shifts the number of places that is equal to the number of zeros in the power of 10.

Multiplying by powers of 10	Dividing by powers of 10
$1.2 \times 10^2 = 1.2 \times 100$ $= \mathbf{120}$ Digits shift 2 place values to the left because the value of the product is <i>100 times as much</i>.	$1.2 \div 10^2 = 1.2 \div 100$ $= \mathbf{0.012}$ Digits shift 2 place values to the right because the value of the quotient is $\frac{1}{100}$ <i>as much</i>.

Try This

1 Which value makes the equation $3.62 \times 10^5 = ?$ true?

- (A) 36,200,000 (B) 36,200
(C) 362,000 (D) 3,620

2 Which value makes the equation $5,708 \div 10^3 = ?$ true?

- (A) 57.08 (B) 5.708
(C) 570.8 (D) 0.5708

3 Which values make the equation $0.72 \times ? = 720$ true?
Select *all* that apply.

- (A) 100 (B) 1,000
(C) 10^3 (D) 10^2

When you multiply or divide by powers of 10 written in exponential form, each digit shifts the number of places that is equal to the exponent. This helps you reason about the placement of the decimal point.

$$57.9 \times 10^3 = 57,900$$

$$57.9 \times 10^2 = 5,790$$

$$57.9 \times 10^1 = 579$$

$$57.9 \div 10^1 = 5.79$$

$$57.9 \div 10^2 = 0.579$$

$$57.9 \div 10^3 = 0.0579$$

Try This

- 1 Diego evaluated the expression $3,005 \times 10^3$ and said, "The answer is 30,050 because 10^3 has 3 zeros. There are already 2 zeros in 3,005, so I placed 1 more at the end so that there are 3 zeros in the product."

What is Diego's error? Explain what he should do to get the correct answer and include the correct answer in your response.

Sub-Unit 1 | Summary

In this sub-unit . . .

- We expressed powers of 10 in different ways, including using exponential form with a **base** and an **exponent**.

Exponential form	10^{11} base exponent
Multiplication expression	$10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10$
Standard form	100,000,000,000

- We multiplied and divided by powers of 10.

$$16 \times 10^2 = 1,600$$

$$16 \div 10^2 = 0.16$$

$$1.6 \times 10^2 = 160$$

$$1.6 \div 10^2 = 0.016$$

When multiplying by 10^2 , each digit shifts 2 places to the left because $10^2 = 100$.

When dividing by 10^2 , each digit shifts 2 places to the right because $10^2 = 100$.

 **Math tip:** When multiplying a whole number and a power of 10, the number of zeros in the product is equal to the number of zeros in all the factors when the factors are written in standard form.

Summary | Lesson 6

You can convert a smaller unit to a larger unit using multiplication or division.

326,000 meters = 326 kilometers

$$1,000 \text{ m} = 1 \text{ km}$$

$$326,000 \div 1,000 = 326$$

or

$$\frac{1}{1,000} \text{ km} = 1 \text{ m}$$

$$326,000 \times \frac{1}{1,000} = 326$$

So, 326,000 meters is equal to 326 kilometers.

Try This

- 1 Shawn biked 21,900 meters last week. How many kilometers did Shawn bike?

 **Show your thinking.**

answer: _____

Summary | Lesson 7

You can use multiplication and division to convert different-sized metric units of weight. Multi-step problems sometimes require an operation to be used in addition to converting the units.

5 owls weigh a total of 25,000,000 milligrams. If each owl weighs the same, how many kilograms does each owl weigh?

$$1 \text{ kg} = 1,000 \text{ g}$$

$$1 \text{ g} = 1,000 \text{ mg}$$

$$1 \text{ kg} = 1,000,000 \text{ mg}$$

$25,000,000 \div 5 = 5,000,000$, so each owl weighs 5,000,000 milligrams.

$1,000,000 \text{ milligrams} = 5 \text{ kilograms}$

Each owl weighs 5 kilograms.

Try This

- 1 A guinea pig and 7 kilograms equal 8,500 grams. What does the guinea pig weigh in kilograms?



Show or explain your thinking.

answer: _____

Summary | Lesson 8

When solving multi-step problems involving measurement conversions, you can convert at different points in your answer and the final answer will be the same.

5 volunteers each mixed 4.5 liters of nectar with 3,800 milliliters of water. How many total liters of nectar mixture did they make?

Strategy A	Strategy B
$3,800 \div 1,000 = 3.8$, so 3.8 liters	$5 \times 4.5 = 22.5$, so 22.5 liters $5 \times 3,800 = 19,000$, so 19,000 milliliters
$4.5 + 3.8 = 8.3$, so 8.3 liters	$19,000 \div 1,000 = 19$, so 19 liters
$8.3 \times 5 = 41.5$, so 41.5 liters	$22.5 + 19 = 41.5$, so 41.5 liters

Try This

- 1** An artist has 3 colors of paint that she mixes to make a custom color. How many total liters of paint does the artist use to make the custom color?

Paint A	Paint B	Paint C
450 milliliters	$\frac{1}{4}$ liters	300 milliliters

- (A) 1 liter
(B) $1\frac{1}{2}$ liters
(C) 10 liters
(D) 1,000 liters

Summary | Lesson 9

You can use multiplication or division to convert customary or metric units. The only difference is that in the Customary system, the relationships between units are not powers of 10.

Compare: $\frac{1}{5}$ miles and 360 yards	
Convert	Convert to a common unit
$1 \text{ mile} = 5,280 \text{ feet}$ $1 \text{ yard} = 3 \text{ feet}$ $1 \text{ mile} = 1,760 \text{ yards}$ $\frac{1}{5} \times 1,760 = \frac{1,760}{5} = 352$ $360 \text{ yards} > 352 \text{ yards}$	$1 \text{ mile} = 5,280 \text{ feet}$ $\frac{1}{5} \times 5,280 = 1,056$, so 1,056 feet $1 \text{ yard} = 3 \text{ feet}$ $360 \times 3 = 1,080$, so 1,080 feet $1,080 \text{ feet} > 1,056 \text{ feet}$
$360 \text{ yards} > \frac{1}{5} \text{ miles}$	

Try This

- 1 A lap around a track is 400 yards. If an athlete wants to run at least 2 miles, how many full laps should the athlete run?



Show or explain your thinking.

answer: _____

Summary | Lesson 10

When you have multiple steps in a customary measurement conversion problem, you can start the problem using any strategy.

Jenny gave water to 6 dogs and 9 cats at an animal shelter. She gave 1 pint of water to each dog and 1 cup of water to each cat. How many quarts of water did Jenny give?

1 pint = 2 cups, 1 quart = 4 cups
6 dogs need 12 cups and 9 cats need 9 cups.
 $12 + 9 = 21$, so 21 cups
 $21 \text{ cups} = 5\frac{1}{4} \text{ quarts}$ because $21 \div 4 = 5\frac{1}{4}$.
 $5\frac{1}{4}$ quarts

Try This

- 1** A machine requires a total of 96 cups, 20 pints, and 14 quarts of water to work properly. How many gallons of water does the machine require?

 **Show or explain your thinking.**

answer: _____

Summary | Lesson 11

You can use the relationship between tons, pounds, and ounces to solve multi-step problems. A **ton** is a unit of weight in the Customary system.

An elephant weighs 3 tons and 1,000 pounds. How much does the elephant weigh in ounces?

$$16 \text{ oz} = 1 \text{ lb}$$

$$2,000 \text{ lb} = 1 \text{ ton}$$

$$32,000 \text{ oz} = 1 \text{ ton}$$

$$32,000 \times 3 = 96,000, \text{ so } 96,000 \text{ oz}$$

$$1,000 \times 16 = 16,000, \text{ so } 16,000 \text{ oz}$$

$$96,000 + 16,000 = 112,000, \text{ so } 112,000 \text{ oz}$$

The elephant weighs 112,000 ounces.

Try This

The table shows the weights of 3 animals. Use the table for Problem 1.

Animal	desert toad	lion	gecko
Weight	1.5 pounds	0.15 tons	2 ounces

- 1 How much do 48 geckos weigh in pounds?

 Show or explain your thinking.

answer: _____

Sub-Unit 2 | Summary

In this sub-unit . . .

- We converted between metric units and between customary units. We saw that we can use powers of 10 to convert between metric units, but not between customary units.

Convert from larger to smaller unit	Convert from smaller to larger unit
90 km = 90,000,000 mm 1 km = 1,000 m $90 \times 1,000 = 90,000$ 1 m = 1,000 mm $90,000 \times 1,000 = 90,000,000,000$	26,400 ft = 8,800 yd 3 ft = 1 yd $26,400 \div 3 = 8,800$ or $26,400 \times \frac{1}{3} = \frac{26,400}{3} = 8,800$

 **Math tip:** When converting from a smaller unit to a larger unit, you can divide by a number greater than 1 or multiply by a number less than 1.

- We solved multi-step problems involving unit conversions.

The volunteers have a cooler filled with 9 liters of pre-mixed nectar that they will use to fill Feeders A, B, and C. How many milliliters of nectar will be left in the cooler after filling the feeders?

Feeder A	Feeder B	Feeder C
4.8 liters	500 milliliters	$1\frac{1}{2}$ liters

$$4.8 \text{ L} + 500 \text{ mL} + 1\frac{1}{2} \text{ L}$$

$$4.8 \text{ L} + 0.5 \text{ L} + 1.5 \text{ L} = 6.8 \text{ L}$$

Feeders A, B, and C need 6.8 L of nectar.

$$9 \text{ L} - 6.8 \text{ L} = 2.2 \text{ L}$$

$$2.2 \text{ L} = 2,200 \text{ mL}$$

There are 2,200 mL left in the cooler.

Summary | Lesson 12

You can add and subtract fractions with unlike denominators by using diagrams or equations that represent the fractions using the same-sized parts.

$$\frac{1}{5} + \frac{3}{10}$$



$$\frac{1 \times 2}{5 \times 2} = \frac{2}{10}$$

$$\frac{2}{10} + \frac{3}{10} = \frac{5}{10}$$

Try This

- 1 A dog eats $\frac{3}{4}$ cups of dog food in the morning and $\frac{7}{8}$ cups in the evening. How many cups of dog food does the dog eat?

 Show or explain your thinking.

answer: _____

Summary | Lesson 13

When 1 denominator is a multiple of the other, an equivalent fraction for only one of the original fractions needs to be created. When 1 denominator is not a multiple of the other, you can determine equivalent fractions for both.

Rename 1 fraction	Rename both fractions
$\frac{3}{4} + \frac{5}{8}$ $\frac{3 \times 2}{4 \times 2} = \frac{6}{8}$ $\frac{6}{8} + \frac{5}{8} = \frac{11}{8}$	$\frac{3}{5} + \frac{5}{8}$ $\frac{3 \times 8}{5 \times 8} = \frac{24}{40} \quad \frac{5 \times 5}{8 \times 5} = \frac{25}{40}$ $\frac{24}{40} + \frac{25}{40} = \frac{49}{40}$
$\frac{6}{9} - \frac{1}{3}$ $\frac{6 \div 3}{9 \div 3} = \frac{2}{3}$ $\frac{2}{3} - \frac{1}{3} = \frac{1}{3}$	

Try This

For Problems 1 and 2, evaluate the expression.

 Show or explain your thinking.

1 $\frac{2}{3} + \frac{11}{12}$

answer: _____

2 $\frac{2}{3} - \frac{3}{6}$

answer: _____

Summary | Lesson 14

When adding and subtracting unlike denominators, multiples or the product of the denominators can always be used as a common denominator. A factor that each denominator shares can sometimes be used as a common denominator.

$\frac{3}{4} - \frac{7}{10}$	$\frac{14}{8} + \frac{9}{12}$
$\frac{3 \times 5}{4 \times 5} = \frac{15}{20} \quad \frac{7 \times 2}{10 \times 2} = \frac{14}{20}$ $\frac{15}{20} - \frac{14}{20} = \frac{1}{20}$	$\frac{14 \div 2}{8 \div 2} = \frac{7}{4} \quad \frac{9 \div 3}{12 \div 3} = \frac{3}{4}$ $\frac{7}{4} + \frac{3}{4} = \frac{10}{4}$

Try This

- 1 Which numbers could be used as a common denominator when adding or subtracting $\frac{7}{8}$ and $\frac{5}{6}$? Select *all* that apply.

(A) 3

(B) 12

(C) 14

(D) 16

(E) 24

(F) 48

- 2 Which common denominator from Problem 1 would you use to determine the sum of or difference between $\frac{7}{8}$ and $\frac{5}{6}$? Explain your thinking.

Summary | Lesson 15

You can estimate sums of mixed numbers just like you did with fractions. Once you have an equivalent expression with a common denominator, you can use any strategy to add mixed numbers.

$$3\frac{2}{3} + 4\frac{5}{8}$$

Estimate	Add using any strategy
The sum is between 8 and 9 because $3 + 4 = 7$ and both fractions are greater than $\frac{1}{2}$.	$3 + 4 + \frac{2}{3} + \frac{5}{8} = 7 + \frac{2}{3} + \frac{5}{8}$ $\frac{2 \times 8}{3 \times 8} = \frac{16}{24} \text{ and } \frac{5 \times 3}{8 \times 3} = \frac{15}{24}$ $7 + \frac{16}{24} + \frac{15}{24} = 7\frac{31}{24} \text{ or } 8\frac{7}{24}$

Try This

- 1 If Clare uses $2\frac{5}{6}$ ounces of purple glitter and $1\frac{9}{10}$ ounces of red glitter on a project, about many ounces of glitter does she use?

Summary | Lesson 16

Once you have an equivalent expression with a common denominator, you can use any strategy to subtract mixed numbers.

$$3\frac{3}{16} - 1\frac{5}{8} = 3\frac{3}{16} - 1\frac{10}{16}$$

Subtract whole numbers and fractions	Add up
$3\frac{3}{16} = 2\frac{19}{16}$ $2\frac{19}{16} - 1\frac{10}{16}$ $2 - 1 = 1$ $\frac{19}{16} - \frac{10}{16} = \frac{9}{16}$ $\frac{9}{16} + 1 = 1\frac{9}{16}$	$1\frac{10}{16} + \frac{6}{16} = 2$ $2 + 1 = 3$ $3 + \frac{3}{16} = 3\frac{3}{16}$ $\frac{6}{16} + 1 + \frac{3}{16} = 1\frac{9}{16}$

Try This

- Diego adds $2\frac{7}{9}$ cups of green grapes and $1\frac{3}{10}$ cups of red grapes to a bowl. About how many more cups of green grapes than red grapes are there? Explain your thinking.

Summary | Lesson 17

When adding and subtracting with more than 2 fractions and mixed numbers, you can choose a common denominator for all the fractions or for 2 at a time.

$$13\frac{3}{8} + \frac{19}{16} - 4\frac{25}{32}$$

All fractions	2 fractions at a time
$13\frac{12}{32} + \frac{38}{32} - 4\frac{25}{32} = 9\frac{25}{32}$	$13\frac{6}{16} + \frac{19}{16} = 13\frac{25}{16}$ $13\frac{50}{32} - 4\frac{25}{32} = 9\frac{25}{32}$

Try This

Evaluate the expression.



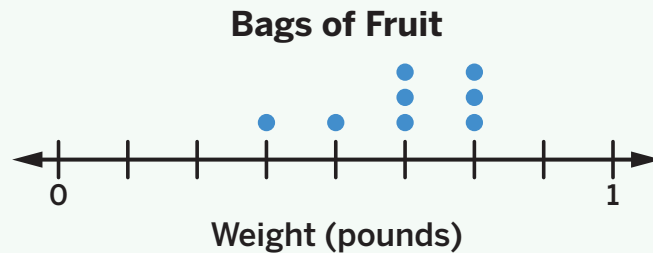
Show your thinking.

1

$$7\frac{2}{4} + \frac{3}{2} + 4\frac{5}{6}$$

answer: _____

You can represent data involving fractions and mixed numbers on a line plot and solve real-world problems.



What is the total weight of all the bags of fruit?

$$\frac{3}{8} + \frac{4}{8} + \left(3 \times \frac{5}{8}\right) + \left(3 \times \frac{6}{8}\right) = \frac{40}{8} \text{ or } 5$$

The total weight is 5 pounds.

Try This

Several students were surveyed about how many hours they read in a week. The results are shown in the table.

$3\frac{1}{4}$	$2\frac{3}{4}$	$3\frac{2}{4}$	$2\frac{1}{2}$	3	$2\frac{2}{8}$	$3\frac{4}{8}$
$2\frac{1}{2}$	2	$2\frac{2}{8}$	$3\frac{3}{4}$	$2\frac{1}{2}$	$2\frac{4}{8}$	$2\frac{1}{4}$
$1\frac{1}{4}$	$2\frac{3}{4}$	3	$2\frac{4}{8}$	$3\frac{1}{2}$	$3\frac{1}{4}$	$1\frac{1}{4}$

- 1 Use the data points in the table to create a line plot to represent the number of hours read in a week. Be sure to include a title and label.



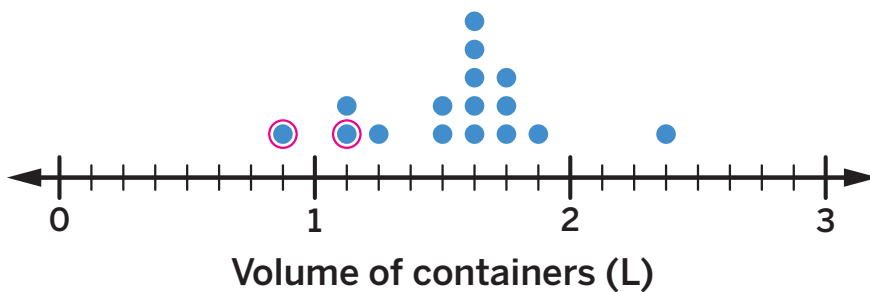
Show your thinking.

Summary | Lesson 19

You can use different strategies to solve problems with line plot data involving mixed numbers and whole numbers that may require using 1 or more operations. Some problems may have 1 answer, and others may have multiple answers.

How many total liters of nectar do the 2 containers with the least volume hold?

Containers of Homemade Nectar



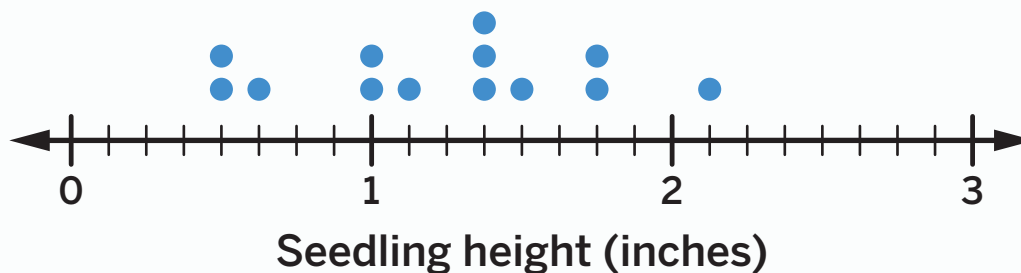
$$\frac{7}{8} + 1\frac{1}{8} = 1\frac{8}{8} \text{ or } 2$$

Try This

1 Han is making a line plot representing the height of the seedlings his class grew. Use the information to complete the line plot.

- There are 15 seedlings altogether.
- The tallest seedling is $2\frac{1}{8}$ inches taller than the shortest seedling.
- There are 3 seedlings of the shortest height.

Growing Plants



Sub-Unit 3 | Summary

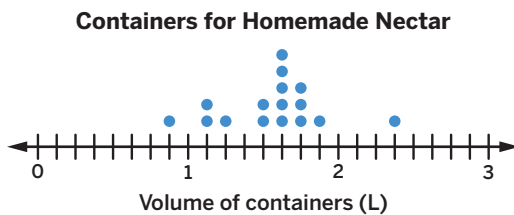
In this sub-unit . . .

- We created common denominators to add and subtract fractions and mixed numbers.

Rename 1 fraction		
$4\frac{3}{4} - 3\frac{11}{12}$	$4\frac{9}{12} = 3\frac{21}{12}$	
$\frac{3 \times 3}{4 \times 3} = \frac{9}{12}$	$3\frac{21}{12} - 3\frac{11}{12} = \frac{10}{12}$	
Rename both fractions		
$\frac{3}{5} + \frac{5}{8}$	$\frac{3}{4} - \frac{7}{10}$	$\frac{14}{8} + \frac{9}{12}$
$\frac{3 \times 8}{5 \times 8} = \frac{24}{40}$	$\frac{3 \times 5}{4 \times 5} = \frac{15}{20}$	$\frac{14 \div 2}{8 \div 2} = \frac{7}{4}$
$\frac{5 \times 4}{8 \times 4} = \frac{20}{40}$	$\frac{7 \times 2}{10 \times 2} = \frac{14}{20}$	$\frac{9 \div 3}{12 \div 3} = \frac{3}{4}$
$\frac{20}{40} + \frac{24}{40} = \frac{44}{40}$	$\frac{15}{20} - \frac{14}{20} = \frac{1}{20}$	$\frac{7}{4} + \frac{3}{4} = \frac{10}{4}$

 **Math tip:** When 1 denominator is a multiple of the other, you can rename the other fraction using that denominator.

- We solved problems using data from a line plot.



Quique will use all of the nectar to equally fill 12 butterfly feeders. How much nectar can Quique put in each feeder?

$$(5 \times 1\frac{5}{8}) + (3 \times 1\frac{6}{8}) + (2 \times 1\frac{4}{8}) + (2 \times 1\frac{1}{8}) + \frac{7}{8} + 1\frac{2}{8} + 1\frac{7}{8} + 2\frac{3}{8} = 25$$

$$25 \div 12 = 2\frac{1}{12}$$

Quique can put $2\frac{1}{12}$ liters in each feeder.

Try This | Answer Key

Lesson 2

Sample responses shown.

1 $10 \times 10 \times 10 \times 10 \times 10 \times 10$

2 10^7

Lesson 3

Sample equivalent expressions shown.

	Equivalent expression with a power of 10 in exponential form	Product in standard form
1	40×10^4	400,000
2	30×10^2	3,000
3	850×10^4	8,500,000

Lesson 4

1 C

2 B

3 B and C

Lesson 5

1 Sample response shown.

Diego's product is only 10 times as much as 3,005, and it should be 1,000 times as much. The product should be 3,005,000.

Lesson 6

1 Sample work shown.

1 kilometer = 1,000 meters

$21,900 \div 1,000 = 21.9$

or

$21,900 \times \frac{1}{1,000} = \frac{21,900}{1,000} = 21.9$

answer: 21.9 kilometers

Lesson 7

1 Sample work shown.

$$7 \times 1,000 = 7,000$$

$$7,000 + 1,500 = 8,500$$

$$1,500 \div 1,000 = 1.5$$

answer: 1.5 kilograms

Lesson 8

1 A

Lesson 9

1 Sample work shown.

There are 5,280 feet in a mile, so that's $5,280 \div 3$, or 1,760 yards. 2 miles is $2 \times 1,760$, or 3,520 yards. 9 laps $\times$ 400 yards equals 3,600 yards, so the athlete should run 9 laps.

answer: 9 laps

Lesson 10

1 Sample work shown.

$$96 \div 16 = 6$$

$$20 \div 8 = 2\frac{1}{2}$$

$$14 \div 4 = 3\frac{1}{2}$$

$$96 \text{ cups} = 6 \text{ gallons}$$

$$20 \text{ pints} = 2\frac{1}{2} \text{ gallons}$$

$$14 \text{ quarts} = 3\frac{1}{2} \text{ gallons}$$

$$6 + 2\frac{1}{2} + 3\frac{1}{2} = 12$$

answer: 12 gallons

Lesson 11

1 Sample work shown.

16 ounces = 1 pound, so 8 geckos weigh 1 pound.

$48 \div 8 = 6$, so 48 geckos weigh 6 pounds.

answer: 6 pounds

Lesson 12

1 Sample work shown.



$$\frac{6}{8} + \frac{7}{8} = \frac{13}{8}$$

or

$$\frac{3}{4} = \frac{6}{8}$$

$$\frac{6}{8} + \frac{7}{8} = 1\frac{5}{8}$$

answer: $1\frac{5}{8}$ cups or equivalent

Lesson 13

Sample work shown.

1

$$\frac{2 \times 4}{3 \times 4} = \frac{8}{12}$$

$$\frac{8}{12} + \frac{11}{12} = \frac{19}{12}$$

answer: $1\frac{7}{12}$ cups or equivalent

2

$$\frac{2 \times 2}{3 \times 2} = \frac{4}{6}$$

$$\frac{4}{6} - \frac{3}{6} = \frac{1}{6}$$

answer: $\frac{1}{6}$ cups or equivalent

Lesson 14

1

E and F

2

Sample response shown.

24. I would use 24 as the common denominator because 24 is a multiple of both 6 and 8.

Lesson 15

1

Sample response shown.

About 5 ounces because $2\frac{5}{6}$ is close to 3, $1\frac{9}{10}$ is close 2, and $3 + 2 = 5$.

Lesson 16

1 Sample response shown.

A little less than 2 cups because $2\frac{7}{9}$ is close to 3, $1\frac{3}{10}$ is close 1, and $3 - 1 = 2$.

Lesson 17

1 Sample work shown.

$$\frac{2 \times 3}{4 \times 3} = \frac{6}{12} \quad \frac{3 \times 6}{2 \times 6} = \frac{18}{12} \quad \frac{5 \times 2}{6 \times 2} = \frac{10}{12}$$

$$7\frac{6}{12} + \frac{18}{12} + 4\frac{10}{12}$$

$$7 + 4 = 11$$

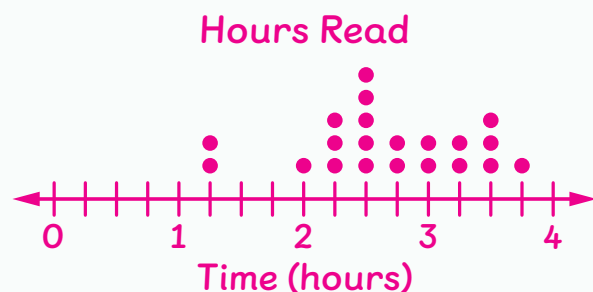
$$\frac{6}{12} + \frac{18}{12} + \frac{10}{12} = \frac{34}{12} = 2\frac{10}{12}$$

$$11 + 2\frac{10}{12} = 13\frac{10}{12}$$

answer: $13\frac{10}{12}$ or equivalent

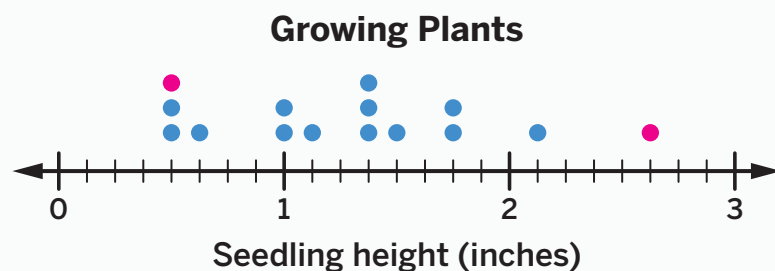
Lesson 18

1 Sample response shown.



Lesson 19

1 Sample response shown.



Grade 5 Unit 6 Glossary/5.º grado Unidad 6 Glosario

English

Español

D

dividend The number being divided, representing the total number being equally distributed or divided.

dividendo El número que se divide, que representa el número total que se distribuye o divide equitativamente.

E

exponent Exponents can be used to represent a power of 10 in a more concise way. The whole-number exponent in a power of 10 represents how many times the number 10 is multiplied by itself in a multiplication expression, or represents the number of zeros when written as a number in standard form.

exponente Los exponentes se pueden utilizar para representar una potencia de 10 de una manera más concisa. El exponente en número natural en una potencia de 10 representa la cantidad de veces que el número 10 se multiplica por sí mismo en una expresión de multiplicación o el número de ceros cuando se escribe como número en forma estándar.

F

factor A number that is multiplied with another number to give a product.

factor Un número que se multiplica por otro número para dar un producto.

K

kilogram A weight unit in the metric measurement system. There are 1,000 grams in 1 kilogram.

kilogramo Unidad de peso del sistema de medida métrico decimal. Hay 1,000 gramos en 1 kilogramo.

kilometer A length unit in the metric measurement system. There are 1,000 meters in a kilometer.

kilómetro Unidad de longitud del sistema de medida métrico decimal. Hay 1,000 metros en 1 kilómetro.

English

Español

M

milligram A weight unit in the metric measurement system. There are 1,000 milligrams in 1 gram.

miligramo Unidad de peso del sistema de medida métrico decimal. Hay 1,000 miligramos en 1 gramo.

millimeter A length unit in the metric measurement system. There are 1,000 millimeters in 1 meter.

milímetro Unidad de longitud del sistema de medida métrico decimal. Hay 1,000 milímetros en 1 metro.

mixed number A number expressed as a whole number and a fraction less than 1.

número mixto Un número expresado como un número natural y una fracción menor que 1.

P

product The result of multiplying 2 numbers.

producto El resultado de multiplicar 2 números.

Q

quotient The result of dividing 2 numbers representing either the number of equal-sized groups or the size of each group.

cociente El resultado al dividir 2 números que representa el número de grupos de igual tamaño o el tamaño de cada grupo.

S

sum The total when 2 or more numbers are added.

suma El total cuando se suman 2 o más números.

T

ton A weight unit in the customary measurement system. There are 2,000 pounds in 1 ton.

tonelada Unidad de peso en el sistema de medida estándar. Hay 2,000 libras en 1 tonelada.