

## MODULE 5

# Dividing RealLife Numbers

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Dan spent \$5.89 for lunch on Monday, \$9.50 on Tuesday, and \$8.23 on Wednesday. What is the average amount of money he spent for lunch so far this week?

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## Module 5: Dividing Real Life Numbers

In this module, you will be learning several skills for success. Skills for success are skills needed in everyday life to be successful at work, when learning and for life.

(Retrieved from: <https://www.canada.ca/en/services/jobs/training/initiatives/skills-success.html>)

In this module you will practice the following skills for success:

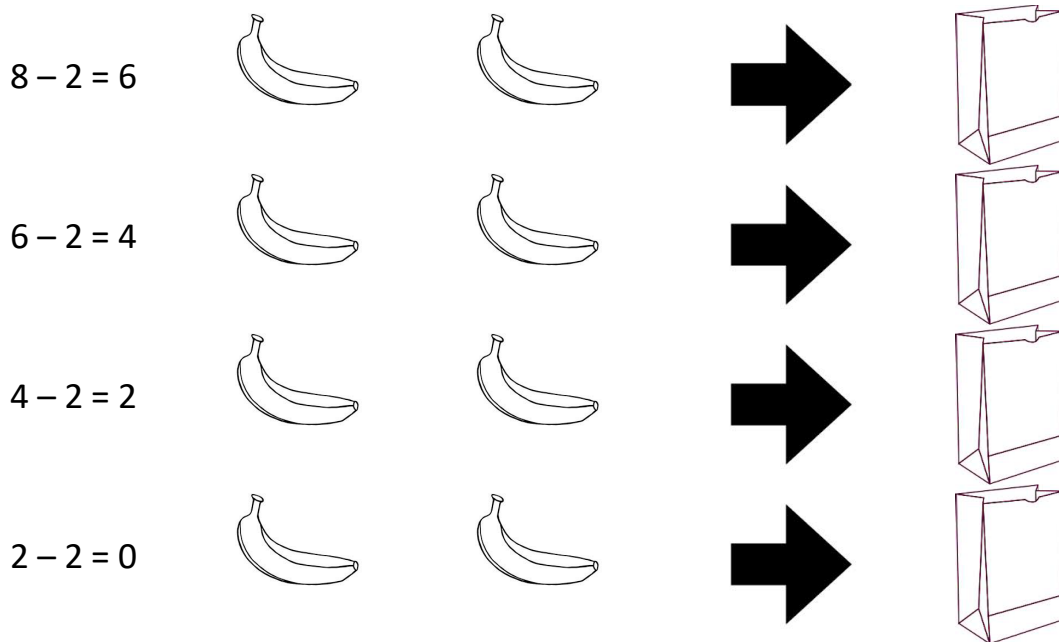
- a) **Numeracy:** Numeracy skills are critical to your success in today's society. Numeracy skills are necessary at work, in everyday life and in learning environments. You require these skills to understand numbers, perform calculations, manage budgets, interpret data and make estimations.
- b) **Problem Solving:** Problem solving skills help you to make decisions, solve problems and make changes. Improving your problem solving skills will help you make better decisions by teaching you to identify a problem, gather the correct information and solve the problem.
- c) **Reading:** Reading is important at work and in daily life activities to keep you informed, safe and successful. Reading is also important in order to learn new skills. This module will help you practice locating information through words, symbols and pictures.
- d) **Writing:** The ability to communicate with other people to share information using words, symbols or images is important for success at work, in a learning environment and everyday life. Improving your writing skills will ensure you are communicating clearly and effectively in various situations.

## PART 1

### The Meaning of Division

Lucille buys 8 bananas for school lunches. If she puts 2 bananas in each bag, how many bags does she need?

To find out, you can use repeated subtraction or division.



You can subtract 4 groups of twos from 8.

You can also divide to show how many groups of twos are in 8. You can write a division fact in two ways.

$$8 \div 2 = 4$$

dividend divisor quotient

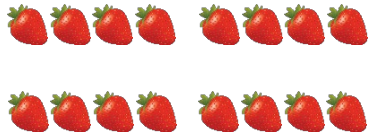
$$2 \sqrt{8} = 4$$

divisor dividend quotient

It is read eight divided by two equals four.

Lucille needs 4 bags.

*Example:* Divide 16 by 4.



$$16 \div 4 = 4$$

There are 4 groups of fours in 16.

## Part 1: The Meaning of Division

### Practice Your Skills

#### Exercise 1A

**Complete.**

1. How many groups of threes are in 12? \_\_\_\_\_
2. How many groups of fives are in 20? \_\_\_\_\_
3. How many groups of twos are in 16? \_\_\_\_\_
4. How many groups of fours are in 24? \_\_\_\_\_

#### Exercise 1B

**Complete each equation, using the same number in each blank. Then write the number of times you subtracted each number. Write the division fact.**

		Number of Subtractions	Division Fact
5.	$6 - 3 - 3 = 0$	2	$6 \div 3 = 2$
6.	$10 - \underline{\quad} - \underline{\quad} - \underline{\quad} - \underline{\quad} - \underline{\quad} = 0$		
7.	$14 - \underline{\quad} - \underline{\quad} = 0$		
8.	$16 - \underline{\quad} - \underline{\quad} = 0$		

### Calculating

You can use the constant feature of a calculator to divide using repeating subtraction.

Press  $8 - 2 = = = =$

Two is the constant number. Press  $=$  until the display reads 0. If this doesn't work on your calculator do the same thing with the  $+$  sign.

**Use a calculator to find the quotient without using the  $\div$  key. Count the number of subtractions until you reach 0.**

9.  $28 \div 4 =$

10.  $32 \div 8 =$

11.  $18 \div 3 =$

12.  $21 \div 7 =$

## PART 2

### Division Facts

Dividing is the reverse of multiplying. In multiplying you have parts. You need a total. In dividing you have a total. You need to find equal parts of it. A word clue for dividing is “each”.

Diane has 20 different sales reports that she needs to review. She decides to divide the task among 4 staff members. She wants each staff member to read the same number of reports. How many reports will each staff member read?



To find out, divide. Think: 4 times what number equals 20?

$$20 \div 4 = 5$$

$$4 \times 5 = 20$$

*Example:* The purchasing agent ordered a box of USB sticks. There were 75 USB sticks in the box to be shared equally by 3 employees. How many USB sticks will each employee receive?



$$75 \div 3 = 25$$

Each employee will receive 25 USB sticks.

**Exercise 2A****Find the quotient.**

1. ○ ○ ○ ○ ○ ○

○ ○ ○ ○ ○ ○

○ ○ ○ ○ ○ ○

$18 \div 3 =$

2. ◇ ◇ ◇ ◇ ◇ ◇ ◇

◇ ◇ ◇ ◇ ◇ ◇ ◇

◇ ◇ ◇ ◇ ◇ ◇ ◇

$21 \div 3 =$

**Exercise 2B****Complete the division tables.**

	÷	2		÷	6		÷	5		÷	8
3.	4		11.	6		19.	10		27.	8	
4.	6		12.	12		20.	15		28.	16	
5.	8		13.	18		21.	20		29.	24	
6.	10		14.	24		22.	25		30.	32	
7.	12		15.	30		23.	30		31.	40	
8.	14		16.	36		24.	35		32.	48	
9.	16		17.	42		25.	40		33.	56	
10.	18		18.	48		26.	45		34.	64	

## PART 3

### Fact Families

Multiplication and division are opposite operations. Knowing your multiplication facts helps you with division facts.

$$8 \times 6 = 48$$

$$6 \times 8 = 48$$

$$48 \div 6 = 8$$

$$48 \div 8 = 6$$

These four number sentences are called a fact family. Fact families make multiplication and division easier.

You can use multiplication to check a division fact.

$$48 \div 8 = 6$$

$$8 \times 6 = 48$$

Multiply the divisor by the quotient.

*Example:* Divide 0 by 6.

Think: What number times 6 equals 0?  $0 \times 6 = 0$

So,  $0 \div 6 = 0$

*Example:* Divide:  $7 \div 7$  and  $7 \div 1$

$7 \div 7 = 1$  When you divide any number except zero by itself, the quotient is 1.

$7 \div 1 = 7$  When you divide any number by 1, the quotient is that number.

### Critical Thinking

Why is it impossible to divide a number by zero? Can you think of an example?



### Exercise 3A

Complete each fact family.

1. <b>6, 7, 42</b>	2. <b>27, 3, 9</b>	3. <b>6, 5, 30</b>
$6 \times 7 = \underline{\hspace{2cm}}$	$3 \times \underline{\hspace{2cm}} = 27$	$\underline{\hspace{2cm}} \times 6 = 30$
$7 \times 6 = \underline{\hspace{2cm}}$	$9 \times 3 = \underline{\hspace{2cm}}$	$6 \times 5 = \underline{\hspace{2cm}}$
$42 \div 7 = \underline{\hspace{2cm}}$	$\underline{\hspace{2cm}} \div 3 = 9$	$\underline{\hspace{2cm}} \div 5 = 6$
$42 \div 6 = \underline{\hspace{2cm}}$	$27 \div 9 = \underline{\hspace{2cm}}$	$30 \div \underline{\hspace{2cm}} = 5$
4. <b>6, 2, 12</b>	5. <b>4, 9, 3</b>	6. <b>4, 3, 12</b>
$\underline{\hspace{2cm}} \times 6 = 12$	$4 \times \underline{\hspace{2cm}} = 36$	$4 \times 3 = \underline{\hspace{2cm}}$
$6 \times 2 = \underline{\hspace{2cm}}$	$\underline{\hspace{2cm}} \times 4 = 36$	$3 \times \underline{\hspace{2cm}} = 12$
$12 \div 6 = \underline{\hspace{2cm}}$	$\underline{\hspace{2cm}} \div 9 = 4$	$12 \div 4 = \underline{\hspace{2cm}}$
$\underline{\hspace{2cm}} \div 2 = 6$	$36 \div \underline{\hspace{2cm}} = 9$	$12 \div \underline{\hspace{2cm}} = 4$
7. <b>4, 16</b>	8. <b>8, 64</b>	9. <b>7, 49</b>
$4 \times \underline{\hspace{2cm}} = 16$	$\underline{\hspace{2cm}} \times 8 = 64$	$7 \times 7 = \underline{\hspace{2cm}}$
$16 \div \underline{\hspace{2cm}} = 4$	$\underline{\hspace{2cm}} \div 8 = 8$	$49 \div \underline{\hspace{2cm}} = 7$

### Exercise 3B

Write the fact family for each set of numbers.

10. 7, 1, 7                     ;                     ;                     ;                     

11. 5, 7, 35                     ;                     ;                     ;                     

12. 3, 6, 18                     ;                     ;                     ;

## PART 4

### Problem Solving Strategy: Choose the Operation

When you make a plan to solve a problem, you must decide whether to add, subtract, multiply, or divide. Look for a key word or phrase that suggests which operation to use. Not all word problems use the same word clues you have already learned. Some may state the problem ask questions in other ways.

**Add**        How many in all?  
                  How many altogether?

Add when you need to find the total.

**Subtract**    How many more?  
                  How many are left?

Subtract when you need to find the difference.

**Multiply**    How many in all?

Multiply when you have equal groups and you need to find the total.

**Divide**        How many does each have?

Divide when you need to know how many can be shared equally.

*Example:*    There are 24 cabins on the Atlantic Deck of the cruise ship. There are 3 sections of cabins. How many cabins are in each section?

What are you asked to find?  
How many cabins are in each section?

To find out, divide  $24 \div 3$ .  
 $24 \div 3 = 8$

## RealLife Math

### Exercise 4A

How would you solve the problem?

Circle or highlight add, subtract, multiply, or divide. Then solve the problem.

1. The cruise director worked 12 hours a day for 4 days. How many hours did she work in all?

add   subtract   multiply   divide

2. The crew loaded 6 boxes of napkins aboard the ship. There are 246 napkins. There are an equal amount of napkins in each box. How many napkins are in each box?

add   subtract   multiply   divide

3. There are 39 people on the upper deck tanning. There are 46 people on the lower deck having lunch. How many people are there in all?

add   subtract   multiply   divide

4. Maggie spends \$39.58 at the souvenir shop. She gives the clerk \$50.00. How much change does she receive?

add   subtract   multiply   divide

5. There are 125 members of the crew and 659 passengers. How many more passengers are there than crew members?

add   subtract   multiply   divide

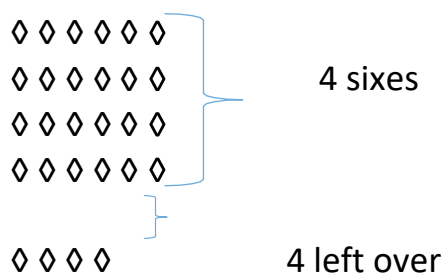
6. The ship's captain invites 23 people to dine at his table each night of the cruise. The cruise lasts for 4 days. How many people were invited to dine at the captain's table?  
add   subtract   multiply   divide
7. A carton of pop has six cases in it. There are 12 cans of pop in each case. How many cans are there in the carton?  
add   subtract   multiply   divide
8. Jack loaded 168 boxes onto four different trucks. Each truck holds the same number of boxes. How many boxes are on each truck?  
add   subtract   multiply   divide
9. Maria bought 12 metres of fabric to make costumes for the school play. Each costume takes 2 metres of fabric. How many costumes can she make?  
add   subtract   multiply   divide
10. Mike owes \$85 to the gas company. He owes \$75 to the cell phone company. He owes \$225 to the electric company. How much does he owe altogether?  
add   subtract   multiply   divide
11. Maria earned \$30,642 last year. She spent \$27,499 on rent, food, taxes, transportation, and other living expenses. How much money did she have left over?  
add   subtract   multiply   divide

## PART 5

### Dividing 2 Digit Numbers

Sometimes a number cannot be divided evenly. The quotient will have a number left over, or a remainder.

*Example:* Divide:  $28 \div 6 =$



$$28 \div 6 = 4 \text{ R}4$$

Remember: The remainder should always be less than the divisor.

*Example:* Divide:  $63 \div 3$

	2		21
Divide 6 tens by 3	$3 \overline{)63}$	Divide 3 ones by 3	$3 \overline{)63}$
	<u>-6</u>		<u>-6</u>
To check your answer, multiply: $21 \times 3 = 63$			3
			<u>-3</u>
			0

*Example:* Divide  $68 \div 2$

3		34	
$2 \overline{)68}$		$2 \overline{)68}$	
<u>-6</u>	subtract.	<u>-6</u>	
0	$3 \times 2.$	8	subtract.
		<u>-8</u>	$4 \times 2.$
		0	

$$68 \div 2 = 34$$

$$\text{Check: } 34 \times 2 = 68$$

*Example:* Divide  $95 \div 3$

When you divide 95 by 3, there is a remainder.

**Step 1**

$$\begin{array}{r} \underline{3} \\ 3 \overline{)95} \\ -9 \phantom{0} \\ \hline 0 \end{array}$$

**Step 2**

$$\begin{array}{r} \underline{31} \\ 3 \overline{)95} \\ -9 \phantom{0} \\ \hline 05 \\ -3 \phantom{0} \\ \hline 2 \end{array}$$

**Step 3**

$$\begin{array}{r} \underline{31} \\ 3 \overline{)95} \\ -9 \phantom{0} \\ \hline 05 \\ -3 \phantom{0} \\ \hline 2 \end{array} \quad \text{R2}$$

Step 1: Divide the 9 tens by 3. Subtract.

Step 2: Divide the 5 ones by 3. Subtract.

Step 3: Write the remainder next to the quotient.

Check by multiplying and adding.

Calculating: Press  $31 \times 3 = 93 + 2 = 95$

▼  
Add the remainder.

*Example:* Divide  $73 \div 4$

$$\begin{array}{r} \underline{1} \\ 4 \overline{)73} \\ -4 \phantom{0} \\ \hline 3 \end{array}$$

$$\begin{array}{r} \underline{18} \\ 4 \overline{)73} \\ -4 \phantom{0} \\ \hline 33 \\ -32 \phantom{0} \\ \hline 1 \end{array}$$

$$\begin{array}{r} \underline{18} \\ 4 \overline{)73} \\ -4 \phantom{0} \\ \hline 33 \\ -32 \phantom{0} \\ \hline 1 \end{array} \quad \text{R1}$$

Check using a calculator.

### Exercise 5A

Divide and check.

1.  $\frac{\quad}{2)45}$

2.  $\frac{\quad}{3)64}$

3.  $\frac{\quad}{4)46}$

4.  $\frac{\quad}{5)57}$

5.  $\frac{\quad}{3)94}$

6.  $\frac{\quad}{2)67}$

7.  $\frac{\quad}{8)89}$

8.  $\frac{\quad}{5)59}$

9.  $\frac{\quad}{5)62}$

10.  $\frac{\quad}{7)82}$

11.  $\frac{\quad}{4)61}$

12.  $\frac{\quad}{2)54}$

13.  $\frac{\quad}{5)56}$

14.  $\frac{\quad}{6)96}$

15.  $\frac{\quad}{3)74}$

16.  $\frac{\quad}{2)58}$

### RealLife Math

Solve.

17. There are 25 new file cabinets to be divided equally among 2 departments. How many new file cabinets will each department get? How many will be left over?

## PART 6

### Dividing Larger Numbers

The copying department ordered 172 packages of paper. Can all the paper be put into 5 equal stacks?

To find out, divide 172 by 5. Think of 1 hundred 7 tens as 17 tens and divide.

Step 1	Step 2
$\begin{array}{r} \underline{3} \\ 5 \overline{)172} \\ -15 \phantom{0} \\ \hline 2 \phantom{0} \end{array}$	$\begin{array}{r} \underline{34} \quad R2 \\ 5 \overline{)172} \\ -15 \phantom{0} \\ \hline 22 \\ -20 \\ \hline 2 \phantom{0} \end{array}$

There will be 5 stacks of 34 with 2 packages of paper left over.

*Example:* Divide 165 by 3.

Step 1	Step 2
$\begin{array}{r} \underline{5} \\ 3 \overline{)165} \\ -15 \phantom{0} \\ \hline 1 \phantom{0} \end{array}$	$\begin{array}{r} \underline{55} \\ 3 \overline{)165} \\ -15 \phantom{0} \\ \hline 15 \\ -15 \\ \hline 0 \end{array}$

Step 1: Divide 16 tens by 3. Subtract.

Step 2: Divide 15 ones by 3. Subtract.



*Example:* Divide 468 by 2.

Step 1	Step 2	Step 3
$\begin{array}{r} \underline{2} \\ 2 \overline{)468} \\ \underline{-4} \\ 0 \end{array}$	$\begin{array}{r} \underline{23} \\ 2 \overline{)468} \\ \underline{-4} \phantom{0} \\ 06 \\ \underline{-6} \\ 0 \end{array}$	$\begin{array}{r} \underline{234} \\ 2 \overline{)468} \\ \underline{-4} \phantom{0} \\ 06 \\ \underline{-6} \\ 08 \\ \underline{-8} \\ 0 \end{array}$

Step 1: Divide 4 hundreds by 2. Subtract.

Step 2: Divide 6 tens by 2. Subtract.

Step 3: Divide 8 ones by 2.

*Example:* Divide 585 by 5.

Step 1	Step 2	Step 3
$\begin{array}{r} \underline{1} \\ 5 \overline{)585} \\ \underline{-5} \\ 0 \end{array}$	$\begin{array}{r} \underline{11} \\ 5 \overline{)585} \\ \underline{-5} \phantom{0} \\ 08 \\ \underline{-5} \\ 3 \end{array}$	$\begin{array}{r} \underline{117} \\ 5 \overline{)585} \\ \underline{-5} \phantom{0} \\ 08 \\ \underline{-5} \\ 35 \\ \underline{-35} \\ 0 \end{array}$

Step 1: Divide 5 hundreds by 5. Subtract.

Step 2: Divide 8 tens by 5. Subtract.

Step 3: Divide 35 ones by 5.

**Exercise 6A**  
**Divide.**

1. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 3 \overline{)253} \end{array}$$

2. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 6 \overline{)436} \end{array}$$

3. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 5 \overline{)357} \end{array}$$

4. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 2 \overline{)327} \end{array}$$

5. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 4 \overline{)173} \end{array}$$

6. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 7 \overline{)568} \end{array}$$

7. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 8 \overline{)489} \end{array}$$

8. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 4 \overline{)207} \end{array}$$

9. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 5 \overline{)655} \end{array}$$

10. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 4 \overline{)576} \end{array}$$

11. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 4 \overline{)776} \end{array}$$

12. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 6 \overline{)828} \end{array}$$

13. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 7 \overline{)861} \end{array}$$

14. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 8 \overline{)968} \end{array}$$

15. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 6 \overline{)984} \end{array}$$

16. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 4 \overline{)840} \end{array}$$

## **RealLife Math**

### **Exercise 36B**

**Solve.**

17. Robin is collecting aluminum cans for recycling. She has 336 cans. She puts an equal number of cans in 3 bags. How many cans are in each bag?

18. Olivia travels 776 kilometres in 4 days. She travels the same number of kilometres each day. How many kilometres does Olivia travel each day?

19. Dave makes \$42,312 per year. He gets paid monthly. How much money does he make each month? (There are 12 months in a year).

20. Ed is driving 80 kilometres per hour. How long will it take him to drive 400 kilometres?

21. Inez just received a delivery of 6,244 litres of gas at her service station. There is a shortage of gas and she needs to ration how much she can sell until the next delivery. She wants to make it last for the whole week (7 days). How many litres of gas can she sell each day to make sure the supply lasts for the whole week?

## PART 7

### Zeros in the Quotient

When dividing larger numbers, it is important to align the numbers in the quotient. You must always put a number in the quotient, even if it is a zero.

*Example:* Divide:  $5 \overline{)535}$

Step 1	Step 2	Step 3
$\begin{array}{r} \underline{1} \\ 5 \overline{)535} \\ \underline{-5} \\ 0 \end{array}$	$\begin{array}{r} \underline{10} \\ 5 \overline{)535} \\ \underline{-5} \\ 03 \\ \underline{-0} \\ 3 \end{array}$	$\begin{array}{r} \underline{107} \\ 5 \overline{)535} \\ \underline{-5} \\ 03 \\ \underline{-0} \\ 35 \\ \underline{-35} \\ 0 \end{array}$

*Example:* Carole knitted 615 stitches in 3 rows of an afghan. There are an equal number of stitches in each row. How many stitches are in each row?

To find out, divide 615 by 3.

Step 1	Step 2	Step 3
$\begin{array}{r} \underline{2} \\ 3 \overline{)615} \\ \underline{-6} \\ 0 \end{array}$	$\begin{array}{r} \underline{20} \\ 3 \overline{)615} \\ \underline{-6} \\ 01 \\ \underline{-0} \\ 1 \end{array}$	$\begin{array}{r} \underline{20} \\ 3 \overline{)615} \\ \underline{-6} \\ 01 \\ \underline{-0} \\ 15 \\ \underline{-15} \\ 0 \end{array}$

## Exercise 7A

Divide.

1. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 8 \overline{)832} \end{array}$$

2. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 5 \overline{)530} \end{array}$$

3. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 3 \overline{)906} \end{array}$$

4. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 7 \overline{)756} \end{array}$$

5. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 2 \overline{)616} \end{array}$$

6. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 2 \overline{)812} \end{array}$$

7. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 5 \overline{)510} \end{array}$$

8. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 4 \overline{)824} \end{array}$$

9. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 7 \overline{)721} \end{array}$$

10. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 3 \overline{)624} \end{array}$$

11. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 2 \overline{)418} \end{array}$$

12. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 2 \overline{)802} \end{array}$$

13. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 4 \overline{)806} \end{array}$$

14. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 3 \overline{)316} \end{array}$$

15. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 3 \overline{)922} \end{array}$$

16. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 5 \overline{)521} \end{array}$$

## Mental Math

Sometimes you can use mental math to divide.

$$\begin{array}{r} \underline{108} \\ 2 \overline{)216} \end{array}$$



2 hundreds  $\div$  2 = 1 hundred  
1 ten  $\div$  2 = 0 tens  
16 ones  $\div$  2 = 8 ones

**Use mental math to divide. Write only the quotient.**

17.  $\begin{array}{r} \underline{\phantom{000}} \\ 3 \overline{)333} \end{array}$

18.  $\begin{array}{r} \underline{\phantom{000}} \\ 4 \overline{)428} \end{array}$

19.  $\begin{array}{r} \underline{\phantom{000}} \\ 3 \overline{)369} \end{array}$

20.  $\begin{array}{r} \underline{\phantom{000}} \\ 2 \overline{)414} \end{array}$

## PART 8

### Dividing Money

Grace spends \$8.00 for 5 loaves of French bread. How much does each loaf cost?

To find out, divide \$8.00 by 5. Dividing money amounts is the same as dividing whole numbers. However, you must write a dollar sign and a decimal point in the quotient.

Step 1	Step 2	Step 3
$\begin{array}{r} \underline{\$1.} \\ 5 \overline{) \$8.00} \\ \underline{.5} \\ 3 \end{array}$	$\begin{array}{r} \underline{\$1.6} \\ 5 \overline{) \$8.00} \\ \underline{.5} \\ -30 \\ \underline{-30} \\ 0 \end{array}$	$\begin{array}{r} \underline{\$1.60} \\ 5 \overline{) \$8.00} \\ \underline{.5} \\ -30 \\ \underline{-30} \\ 0 \end{array}$

Step 1: Divide 8 by 5. Subtract.

Step 2: Divide 30 by 5. Subtract.

Step 3: Divide 0 by 5.

To estimate the cost of each loaf of bread, look at Step 1. The quotient is at least \$1.00 and not as much as \$2.00.

*Example:* Divide \$7.08 by 2.

Step 1	Step 2	Step 3
$\begin{array}{r} \underline{\$3.} \\ 2 \overline{) \$7.08} \\ \underline{.6} \\ 1 \end{array}$	$\begin{array}{r} \underline{\$3.5} \\ 2 \overline{) \$7.08} \\ \underline{.6} \\ -10 \\ \underline{-10} \\ 0 \end{array}$	$\begin{array}{r} \underline{\$3.54} \\ 2 \overline{) \$7.08} \\ \underline{.6} \\ -10 \\ \underline{-10} \\ 08 \\ \underline{.8} \\ 0 \end{array}$

**Exercise 8A**  
**Divide.**

1. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 3 \overline{) \$7.62} \end{array}$$

2. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 4 \overline{) \$10.16} \end{array}$$

3. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 5 \overline{) \$17.95} \end{array}$$

4. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 2 \overline{) \$8.20} \end{array}$$

5. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 7 \overline{) \$15.54} \end{array}$$

6. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 3 \overline{) \$3.81} \end{array}$$

7. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 4 \overline{) \$11.92} \end{array}$$

8. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 6 \overline{) \$9.36} \end{array}$$

9. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 5 \overline{) \$7.50} \end{array}$$

10. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 6 \overline{) \$15.90} \end{array}$$

11. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 7 \overline{) \$7.56} \end{array}$$

12. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 5 \overline{) \$6.30} \end{array}$$

13. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 4 \overline{) \$18.36} \end{array}$$

14. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 6 \overline{) \$12.48} \end{array}$$

15. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 3 \overline{) \$15.63} \end{array}$$

16. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 2 \overline{) \$6.12} \end{array}$$



**Estimate. Circle whether the quotient will be more than or less than \$3.00.**

17.  $\frac{\quad}{3)\$10.00}$       18.  $\frac{\quad}{2)\$4.00}$       19.  $\frac{\quad}{4)\$6.50}$   
more less      more less      more less

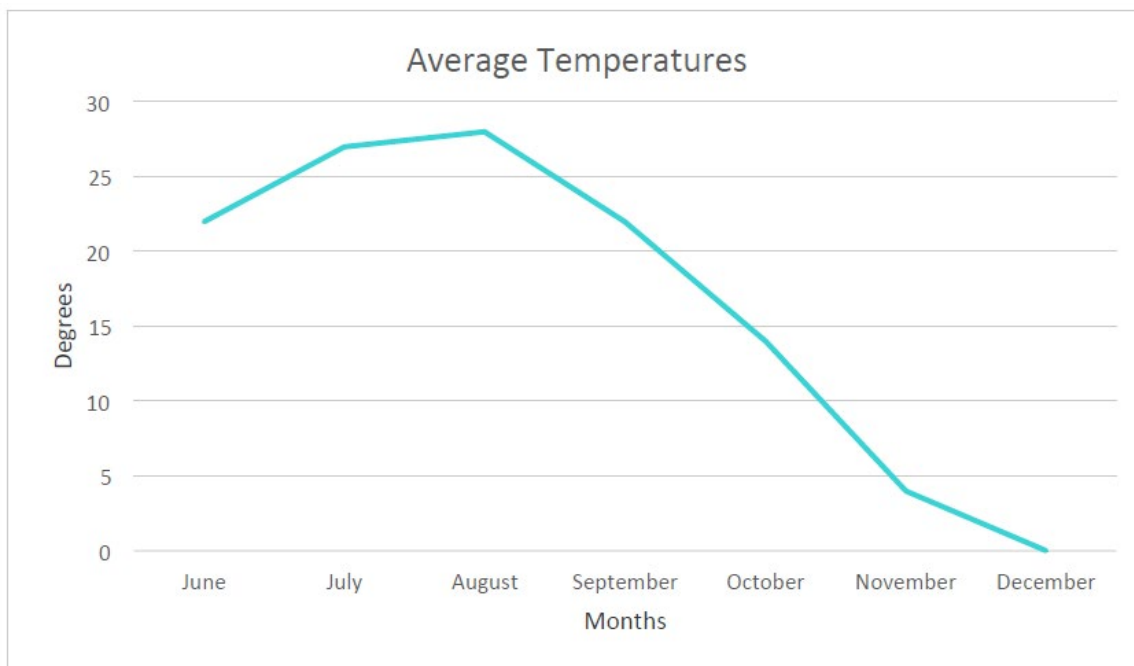
20.  $\frac{\quad}{2)\$12.89}$       21.  $\frac{\quad}{3)\$8.89}$       22.  $\frac{\quad}{4)\$7.90}$   
more less      more less      more less

## PART 9

### Problem Solving Strategy: Using a Line Graph

Different kinds of graphs display different types of information. A line graph shows changes over time, or trends.

Points are plotted on a grid to show data or information. This graph shows the average temperatures in Celcius for the months June through December:



The numbers on the left show the temperature in degrees. The months are shown at the bottom of the graph.

August has the highest average temperature. December has the lowest average temperature.

The line graph shows that the temperatures increased from June to August. The temperatures decreased from September to December.

### Exercise 9A

Use the graph below to answer the questions.



How many boxes of diapers were sold during this month?

1. January \_\_\_\_\_
2. February \_\_\_\_\_
3. March \_\_\_\_\_
4. April \_\_\_\_\_

5. May \_\_\_\_\_
6. June \_\_\_\_\_
7. July \_\_\_\_\_

8. How many more boxes were sold during June than during January?

9. How many boxes of diapers were sold during the first three months of the year?

10. During which two months did the sales remain the same?

## RealLife Math

### Module #5 Task-Based Activity: Calculating Bowling Averages

There are 10 frames in a game of bowling. The player who knocks down the most pins wins the game. A perfect score is 300. A player's average is calculated by adding the scores of each game and dividing the total by the number of games played.

*Example:* Lynette bowls 3 games. Her scores are 115, 129, and 140. What is her average?

115	<u>128</u>
129	3) 384
<u>+140</u>	<u>-3</u>
384	08
	<u>-6</u>
	24
	<u>-24</u>
	0

Lynette's average is 128.

**Find the average for each player.**

**Complete the chart.**

Player	Game 1	Game 2	Game 3	Average
Roy	169	145	130	
Rhonda	100	106	115	
Mickey	175	153	140	
Lisa	157	138	128	
Tracie	89	113	125	

## Module 5: Dividing Whole Numbers

### Review

1. How many groups of threes are in 24? \_\_\_\_\_
2. How many groups of fives are in 35? \_\_\_\_\_

### Divide.

3. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 8 \overline{)40} \end{array}$$
4. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 5 \overline{)25} \end{array}$$
5. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 7 \overline{)7} \end{array}$$
6. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 2 \overline{)10} \end{array}$$
7. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 2 \overline{)48} \end{array}$$
8. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 4 \overline{)26} \end{array}$$
9. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 7 \overline{)23} \end{array}$$
10. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 3 \overline{)56} \end{array}$$
11. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 7 \overline{)85} \end{array}$$
12. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 5 \overline{)147} \end{array}$$
13. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 9 \overline{)265} \end{array}$$
14. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 5 \overline{)755} \end{array}$$
15. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 2 \overline{)447} \end{array}$$
16. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 5 \overline{)140} \end{array}$$
17. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 3 \overline{)612} \end{array}$$
18. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 3 \overline{)281} \end{array}$$
19. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 4 \overline{)\$6.00} \end{array}$$
20. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 5 \overline{)\$5.45} \end{array}$$
21. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 2 \overline{)\$16.84} \end{array}$$
22. 
$$\begin{array}{r} \underline{\hspace{1cm}} \\ 6 \overline{)\$6.48} \end{array}$$