

Fourth Grade Family Resource Bundle

ANSWER KEY > The Crow and the Pitcher

Grade 4

ANSWER KEY Text #1 “The Biggest Little Artist in the World”

by LeeAnn Blankenship 2016

1. RI.KID.2

PART A: Which sentence describes the central idea of the text?

- A. Small art requires more talent and creativity than big art.
- B. Willard found something that he loved and worked hard to succeed at it.**
- C. Art is an important way for kids to express themselves.
- D. Willard was supported by his teachers and family to pursue art.

2. RI.KID.1

PART B: Which detail from the text best supports the answer to Part A?

- A. “Willard was especially curious about those ants. He felt like them — small and insignificant.” (Paragraph 2)
- B. “If he had trouble with his reading or math, Willard later went home and created tiny furniture for the ant houses.” (Paragraph 5)
- C. “Eventually, he quit his factory job to pursue his dream of becoming one of the best artists in the world.” (Paragraph 9)**
- D. “He calms his body and, holding his breath, he carves between heartbeats when blood is not pulsing through his fingertips.” (Paragraph 13)

3. RI.CS.5

How does the author organize the information in “The Biggest Little Artist in the World”?

- A. The author discusses Willard’s struggles early on in life, and then how he became a successful artist.**
- B. The author explains what Willard’s art looks like, and then discusses its significance to Willard.
- C. The author provides a step-by-step guide for how Willard creates each one of his tiny sculptures.
- D. The author describes how Willard was treated before he was a famous artist and compares it to how he is treated now.

4. RI.KID.3

What is the relationship between Willard’s troubles in school and his interest in art?

- 1. Answers will vary; students should discuss how Willard struggled in school due to his learning disability. However, he did feel successful with his artwork. Even though Willard felt discouraged at school, he felt encouraged by the idea that “he could do something**

special” (Paragraph 5). For instance, “If he had trouble with his reading or math, Willard later went home and created tiny furniture for the ant houses” (Paragraph 5). In other words, Willard’s small art helped relieve some of the stress and gave him more self confidence. Eventually, when Willard had to leave school, he turned his attention to working and perfecting his art. Overall, Willard’s struggles in school pushed him to invest his time and energy into something he loved and succeeded in.

ANSWER KEY Text #2 “I Practiced”

by JonArno Lawson 2008

1. RL.KID.2

PART A: Which sentence describes the theme of the poem?

- A. Sometimes taking a lot of time to practice prevents you from discovering and trying something new.
- B. With enough practice, anyone can master anything.
- C. It’s good to take breaks from practicing, even when you’re learning a new skill.
- D. People are inspired to try something new because they fear failure.

2. RL.KID.1

PART B: Which detail from the text best supports the answer to Part A?

- A. “I practiced in a downtown / karaoke sushi bar.” (Lines 3-4)
- B. “though I act as / if I practice / all the time,” (Lines 10-12)
- C. “I practiced full of confidence, / I practiced full of dread.” (Lines 21-22)
- D. “maybe I practiced / when I should have just been doing it” (Lines 25-26)

3. RL.CS.5

What does stanza 3 reveal about the speaker (Lines 9-17)?

- A. The speaker doesn’t think they are improving.
- B. The speaker is thinking about giving up on practicing.
- C. The speaker is afraid to take the next step.
- D. The speaker only pretends to practice.

4. RL.CS.4

Why does the poet repeat the word “practice” over and over again?

- 1. Answers will vary; students should discuss how the repetition of “practice” emphasizes how often the speaker practices their skill. For example, stanzas 1 and 2 explore the various places that the speaker practices. Stanza 4 uses the repetition of the phrase to convey how the speaker feels differently when they practice. For instance, they state, “I practiced full of confidence, / I practiced full of dread” (Lines 20-21). Through the repetition of “practice,” the speaker also shows that practice is all they do, as they never

fully commit to trying this new skill. In the final stanza, the speaker states, “maybe I practiced / when I should have just been doing it / instead?” (Lines 24-26). This shows that the speaker may have been practicing too much, rather than “just doing it” (Line 25).

Related Media Links and Descriptions

Related Media #1: “ [Overcoming Dyslexia, Finding Passion](#) “

In this TED Talk, Piper Otterbein discusses her experiences struggling with dyslexia as well as her ability to overcome these obstacles and succeed. Ask students to discuss how Otterbein’s dyslexia made it difficult for her to succeed in school. How did she overcome these obstacles to discover her passion?(7:12)

Related Media #2: “ [Growth Mindset Video](#)”

Show this video to students to provide them with information about growth mindset and how a person can “grow” their brain by trying new things. How would a growth mindset help the speaker of the poem? Ask students to discuss how practice is important to improve their body and mind. Why do you think it’s scary for people to learn new things and try new skills? (2:31)

Grab and Go Writing Checklists

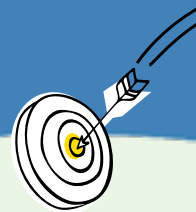
Grades 3-5 Short Response

The following checklists have been provided for families to use as a reference for student writing expectations.

Informational /Explanatory	☐ Begins with a topic sentence that addresses the main question ☐ Explains an idea that supports the topic sentence (at least 1-2 sentences) ☐ Uses evidence (facts and details) from the text to support the idea ☐ Explains how the text evidence supports the topic and idea (at least 1-2 sentences) ☐ Ends with a concluding statement
Entire Response	☐ Has few errors in sentence formatting, capitalization, punctuation, and spelling.

Opinion	☐ Begins by stating an opinion in response to the main question ☐ Explains an idea that supports the opinion (at least 1-2 sentences) ☐ Uses evidence (facts and details) from the text to support the opinion ☐ Explains how the text evidence supports the idea and opinion (at least 1-2 sentences) ☐ Ends with a concluding statement
Entire Response	☐ Has few errors in sentence formatting, capitalization, punctuation, and spelling.

Explore Multiplying by One-Digit Numbers



You have learned how to break apart numbers to multiply and how to multiply one-digit numbers by multiples of ten. Use what you know to try to solve the problem below.

What is the product of 3 and 57?

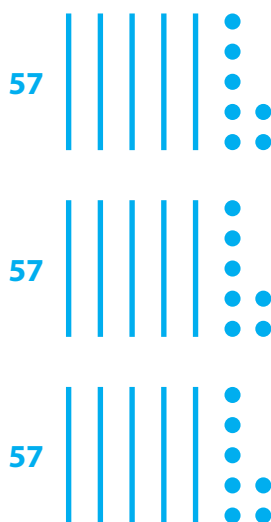
TRY IT

Possible student work:

Sample A

$$57 + 57 + 57 = 114 + 57 \\ = 171$$

Sample B



$$15 \text{ tens} + 21 \text{ ones} = 150 + 21 \\ = 171$$

Learning Target

- Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

SMP 1, 2, 3, 4, 5, 6, 7



Math Toolkit

- base-ten blocks
- counters
- bowls
- grid paper
- sticky notes
- number lines
- multiplication models



DISCUSS IT

Ask your partner: How did you get started?

Tell your partner: I started by ...

CONNECT IT

1 LOOK BACK

Explain how you found the product of 3 and 57.

I found the sum of 3 groups of 57: $57 + 57 + 57 = 171$.

2 LOOK AHEAD

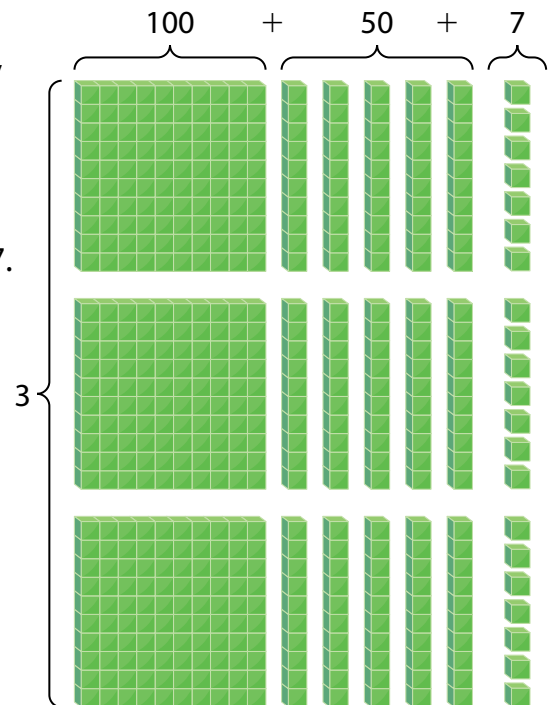
You can use arrays, area models, and **partial products** to break apart numbers to help you multiply. The array at the right uses base-ten blocks to show 3×157 .

a. Write 157 in expanded form. **$157 = 100 + 50 + 7$**

b. Fill in the blanks below to show how to find 3×157 .

$$\begin{aligned} 3 \times 157 &= (3 \times \underline{100}) + (3 \times \underline{50}) + (3 \times \underline{7}) \\ &= \underline{300} + \underline{150} + \underline{21} \\ &= \underline{471} \end{aligned}$$

c. What do you notice about the number of zeros in the product of 3 and 50 and in the product of 3 and 100? How many zeros would be in the product of $3 \times 1,000$? Explain.



Possible answer: The number of zeros in the products of 3 and 50 and 3 and 100 is the same as the number of zeros in 50 and 100. $3 \times 1,000$ would have three zeros in its product.

3 REFLECT

How does breaking apart the multiplication problem above by place value help you solve the problem?

Possible answer: Multiplying 3 by the value in each place makes the problem simpler. I multiply each place value and add the results.

Prepare for Multiplying by One-Digit Numbers

- 1 Think about what you know about multiplication. Fill in each box. Use words, numbers, and pictures. Show as many ideas as you can. **Possible answers:**

What Is It?

The result of multiplication

What I Know About It

A product can be found by using repeated addition or by breaking apart numbers by place value to multiply.

product

Examples

$$2 \times 62 = ?$$


$$12 \text{ tens} + 4 \text{ ones} = 120 + 4 = 124$$

Examples

$$4 \times 38 = ?$$

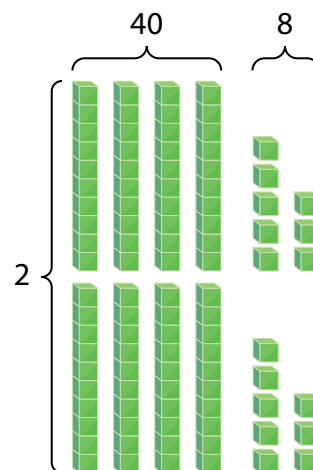
$$38 + 38 + 38 + 38 = 76 + 76 = 152$$

Examples

$$\begin{array}{r} 200 \\ \times 4 \\ \hline 800 \end{array}$$

- 2 Fill in the blanks below to show how to find 2×48 .

$$\begin{aligned} 2 \times 48 &= (2 \times \underline{40}) + (2 \times \underline{8}) \\ &= \underline{80} + \underline{16} \\ &= \underline{96} \end{aligned}$$



- 3 Solve the problem. Show your work.

What is the product of 4 and 62?

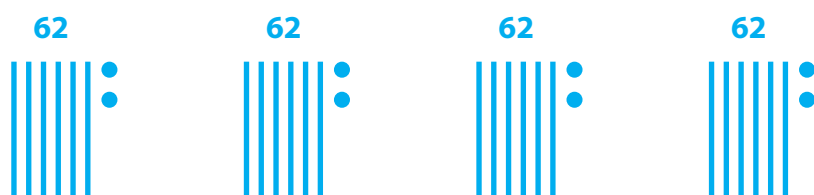
Possible student work using repeated addition:

$$62 + 62 + 62 + 62 = 124 + 124 \\ = 248$$

Solution $4 \times 62 = 248$

- 4 Check your answer. Show your work.

Possible student work:



$$24 \text{ tens} + 8 \text{ ones} = 240 + 8 \\ = 248$$

Lesson 7

Sprint

Side A

1. 6	12. 900	23. 35	34. 54,000
2. 60	13. 9,000	24. 3,500	35. 8,100
3. 600	14. 12,000	25. 24	36. 64,000
4. 6,000	15. 1,200	26. 240	37. 490
5. 6,000	16. 120	27. 36	38. 3,600
6. 8	17. 15	28. 36,000	39. 5,600
7. 80	18. 1,500	29. 42	40. 63,000
8. 800	19. 14	30. 4,200	41. 1,000
9. 8,000	20. 140	31. 72	42. 300
10. 9	21. 16	32. 720	43. 20,000
11. 90	22. 16,000	33. 54	44. 4,000

Side B

1. 8	12. 600	23. 45	34. 54,000
2. 80	13. 6,000	24. 4,500	35. 6,400
3. 800	14. 12,000	25. 32	36. 81,000
4. 8,000	15. 1,200	26. 320	37. 4,900
5. 8,000	16. 120	27. 27	38. 360
6. 9	17. 15	28. 27,000	39. 5,600
7. 90	18. 150	29. 42	40. 63,000
8. 900	19. 12	30. 4,200	41. 100
9. 9,000	20. 120	31. 56	42. 3,000
10. 6	21. 16	32. 560	43. 2,000
11. 60	22. 1,600	33. 54	44. 40,000

CONNECT IT

1 LOOK BACK

Explain how you found the product of 14 and 13.

Possible answer: I broke apart the 13 and multiplied 14 by 10 and 14 by 3. Then I added the products to get 182.

2 LOOK AHEAD

To multiply a two-digit number by another two-digit number, you need to understand how to multiply by multiples of 10.

a. Fill in the blanks to show how to multiply by multiples of 10.

Expression	Think of it as ...	Think of it as ...	Product
3×2	3×2 ones	6 ones	<u>6</u>
3×20	3×2 tens	<u>6</u> tens	60
30×20	$3 \text{ tens} \times 2 \text{ tens}$	<u>6</u> hundreds	600
	$3 \times 10 \times 2 \times 10$		
	$3 \times 2 \times 10 \times 10$		
	6×100		

b. Complete the area model. Then add the four partial products to find 25×32 .

	30	+	2
20	$20 \times 30 = 600$		$20 \times 2 = 40$
+			
5	$5 \times 30 = 150$		$5 \times 2 = 10$

$$\underline{600} + \underline{150} + \underline{40} + \underline{10} = \underline{800}$$

3 REFLECT

Suppose you want to find 30×30 . How can you use a basic fact and breaking apart numbers to find the product of these multiples of 10?

Possible answer: Break apart 30×30 into $3 \times 10 \times 3 \times 10$. Change the order of factors to $3 \times 3 \times 10 \times 10$. $3 \times 3 = 9$; $10 \times 10 = 100$; $9 \times 100 = 900$

Prepare for Multiplying by Two-Digit Numbers

- 1 Think about what you know about multiplication. Fill in each box. Use words, numbers, and pictures. Show as many ideas as you can. **Possible answers:**

What Is It?

A strategy used to multiply multi-digit numbers

What I Know About It

I can use an area model to help find partial products for a multiplication problem.

partial products

Examples

	10	+	5
10	$10 \times 10 = 100$		$10 \times 5 = 50$

$$10 \times 15 = 100 + 50 \\ = 150$$

Examples

$$12 \times 15 = 12 \times (10 + 5) \\ = (12 \times 10) + (12 \times 5) \\ = 120 + 60 \\ = 180$$

Examples

$$\begin{array}{r} 37 \\ \times 5 \\ \hline 35 \quad 5 \times 7 \text{ ones} \\ + 150 \quad 5 \times 3 \text{ tens} \\ \hline 185 \end{array}$$

- 2 Complete the area model. Then add the four partial products to find 18×24 .

	20	+	4
10	$10 \times 20 = 200$		$10 \times 4 = 40$
+			
8	$8 \times 20 = 160$		$8 \times 4 = 32$

$$200 + 160 + 40 + 32 = 432$$

- 3 Solve the problem. Show your work.

What is the product of 16 and 12?

Possible student work:

$$\begin{array}{rcl}
 16 \times 12 & = & 16 \times (10 + 2) \\
 & = & (16 \times 10) + (16 \times 2) \\
 & = & 160 + 32 \\
 & = & 192
 \end{array}
 \qquad
 \begin{array}{r}
 16 \\
 \times 2 \\
 \hline
 12 \\
 + 20 \\
 \hline
 32
 \end{array}$$

Solution $16 \times 12 = 192$

- 4 Check your answer. Show your work.

Possible student work:

	10	+	6
10	$10 \times 10 = 100$		$10 \times 6 = 60$
+			
2	$2 \times 10 = 20$		$2 \times 6 = 12$

$$\begin{aligned}
 100 + 60 + 20 + 12 &= 100 + 80 + 12 \\
 &= 100 + 92 \\
 &= 192
 \end{aligned}$$

$$16 \times 12 = 192$$

Develop Multiplying by Two-Digit Numbers



Read and try to solve the problem below.

Folding chairs are set up in a school auditorium for a play. There are 16 rows of chairs. Each row has 28 chairs. How many folding chairs are set up for the play?

TRY IT

Possible student work:

Sample A

$\begin{array}{r} 16 \\ \times 20 \\ \hline 120 \\ + 200 \\ \hline 320 \end{array}$	$\begin{array}{r} 16 \\ \times 8 \\ \hline 48 \\ + 80 \\ \hline 128 \end{array}$	$\begin{array}{r} 320 \\ + 128 \\ \hline 448 \end{array}$
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There are 448 chairs set up for the play.



Math Toolkit

- base-ten blocks
- grid paper
- multiplication models

Sample B

	20	+	8
10	$10 \times 20 = 200$		$10 \times 8 = 80$
+			
6	$6 \times 20 = 120$		$6 \times 8 = 48$

$$16 \times 28 = 200 + 80 + 120 + 48 = 448$$

There are 448 folding chairs set up for the play.



DISCUSS IT

Ask your partner: Why did you choose that strategy?

Tell your partner: A model I used was ... It helped me ...

Explore different ways to understand multiplying a two-digit number by a two-digit number.

Folding chairs are set up in a school auditorium for a play. There are 16 rows of chairs. Each row has 28 chairs. How many folding chairs are set up for the play?

PICTURE IT

You can use an area model to multiply two-digit numbers.

To solve this problem, multiply 28 by 16.

		20	+	8
10		$10 \times 20 = 200$		$10 \times 8 = 80$
+				
6		$6 \times 20 = 120$		$6 \times 8 = 48$

$$200 + 80 + 120 + 48 = ?$$

MODEL IT

You can also multiply two-digit numbers using partial products.

$$\begin{array}{r}
 28 \\
 \times 16 \\
 \hline
 48 \rightarrow 6 \text{ ones} \times 8 \text{ ones} \\
 120 \rightarrow 6 \text{ ones} \times 2 \text{ tens} \\
 80 \rightarrow 1 \text{ ten} \times 8 \text{ ones} \\
 + 200 \rightarrow 1 \text{ ten} \times 2 \text{ tens} \\
 \hline
 ?
 \end{array}$$



CONNECT IT

Now you will use the problem from the previous page to help you understand how to multiply a two-digit number by a two-digit number.

- 1 Why is the area model divided into four sections?

Each number in the expanded form of one factor is multiplied by each number in the expanded form of the other factor. Each section shows a product.

- 2 How do the four steps in the multiplication using partial products in **Model It** relate to the four sections in the area model in **Picture It**?

Each step shows the product in one section of the area model.

- 3 What is the sum of the partial products and also the product of 28 and 16?

448

- 4 Would the product change if $20 + 8$ on the top of the area model were changed to $10 + 10 + 8$? Explain.

No, the product would be the same. Possible explanation: Instead of a partial product of 200, you would have two partial products of 100. Instead of a partial product of 120, you would have two partial products of 60. The sum of all the partial products would still be the same.

- 5 How could you estimate to check the reasonableness of your answer to 28×16 by multiplying with easier numbers?

Possible answer: $30 \times 10 = 300$ and $30 \times 20 = 600$. My answer is between 300 and 600, so it is reasonable.

6 REFLECT

Look back at your **Try It**, strategies by classmates, and **Picture It** and **Model It**. Which models or strategies do you like best for multiplying a two-digit number by a two-digit number? Explain.

Some students may like drawing an area model because they can add the area of each section to find the product. Other students may like using partial products because they can add them to find the product.

APPLY IT

Use what you just learned to solve these problems.

- 7 Complete the area model below. Then add the partial products to find the product of 27 and 21. Show your work.

Possible student work:

	20	+	7
20	$20 \times 20 = 400$		$20 \times 7 = 140$
+			
1	$1 \times 20 = 20$		$1 \times 7 = 7$

$$400 + 140 + 20 + 7 = 567$$

Solution 567

- 8 Find 37×23 . Show your work.

Possible student work:

$$\begin{array}{r} 37 \\ \times 23 \\ \hline 21 \\ 90 \\ 140 \\ + 600 \\ \hline 851 \end{array}$$

Solution 851

- 9 Select all the expressions that have a product of 640.

☒ (A) 10×64

☐ (B) 60×40

☐ (C) 80×80

☒ (D) $(30 + 2) \times 20$

☒ (E) $(40 \times 10) + (40 \times 6)$

Lesson 13

Sprint

Side A

1. 4	12. 115	23. 63	34. 6,339
2. 40	13. 9	24. 363	35. 6,393
3. 44	14. 120	25. 84	36. 6,933
4. 2	15. 129	26. 284	37. 96
5. 40	16. 8	27. 484	38. 175
6. 42	17. 140	28. 684	39. 162
7. 6	18. 148	29. 884	40. 378
8. 90	19. 6	30. 9	41. 500
9. 96	20. 180	31. 39	42. 642
10. 15	21. 186	32. 639	43. 10,426
11. 100	22. 189	33. 3,639	44. 8,540

Side B

1. 6	12. 125	23. 84	34. 4,226
2. 60	13. 16	24. 484	35. 4,262
3. 66	14. 120	25. 48	36. 4,622
4. 2	15. 136	26. 248	37. 92
5. 60	16. 8	27. 448	38. 265
6. 62	17. 180	28. 648	39. 135
7. 9	18. 188	29. 848	40. 216
8. 60	19. 6	30. 6	41. 645
9. 69	20. 120	31. 26	42. 500
10. 25	21. 126	32. 426	43. 10,624
11. 100	22. 129	33. 2,426	44. 4,940

Explore Dividing Three-Digit Numbers

You have learned about division as equal sharing and about the relationship between multiplication and division. Use what you know to try to solve the problem below.

What is $78 \div 3$?

TRY IT

Possible student work:

Sample A

$$78 = 75 + 3$$

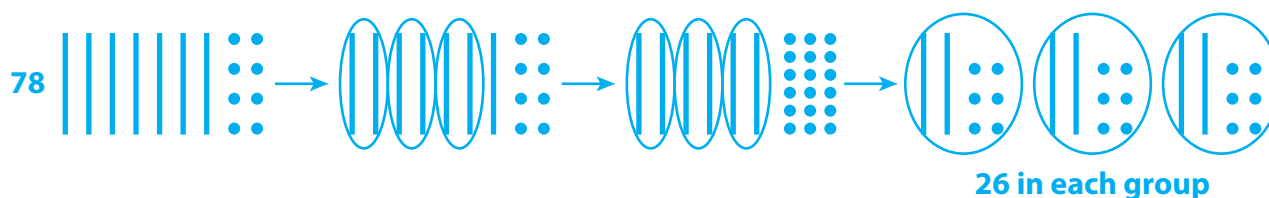
$$3 \times 25 = 75$$

$$3 \times 1 = 3$$

$25 + 1 = 26$, so there are 26 groups of 3.

$$78 \div 3 = 26$$

Sample B



$$78 \div 3 = 26$$

Learning Target

- Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

SMP 1, 2, 3, 4, 5, 6, 7, 8



Math Toolkit

- base-ten blocks
- counters
- bowls
- paper plates
- grid paper
- multiplication models

DISCUSS IT

Ask your partner: How did you get started?

Tell your partner: At first, I thought . . .

CONNECT IT

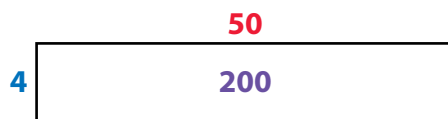
1 LOOK BACK

Explain how you found the quotient of $78 \div 3$.

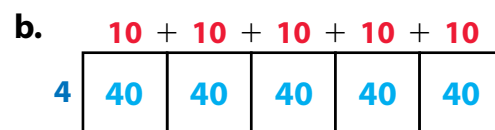
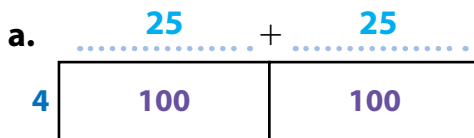
Possible answer: I drew base-ten blocks to show 78. Then I divided 78 into 3 groups, regrouping the extra ten into ones. $78 \div 3 = 26$

2 LOOK AHEAD

You can solve division problems in many ways. You can use place value, rectangular arrays, area models, equations, and the relationship between multiplication and division. The area model below shows $200 \div 4$.



An area model shows both multiplication ($4 \times 50 = 200$) and division ($200 \div 4 = 50$). You can also use area models to break apart a problem into smaller parts. Fill in the missing labels on two other area models for $200 \div 4$.



3 a. Sometimes there is a remainder left over when you divide.

Fill in the remainder for $21 \div 4$ in the box at the right.

$$\begin{array}{r} 5 \text{ R } \boxed{1} \\ 4 \overline{)21} \end{array}$$

b. The **dividend** is $\frac{21}{\dots\dots\dots}$, the number you are dividing.

c. The **divisor** is $\frac{4}{\dots\dots\dots}$, the number you are dividing by.

d. The quotient is $\frac{5 \text{ R } 1}{\dots\dots\dots}$, the result of the division problem.

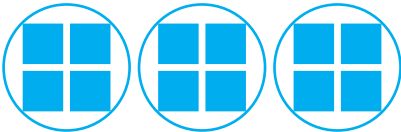
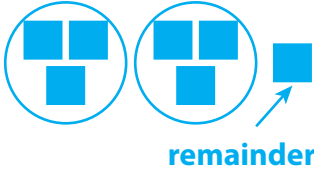
4 REFLECT

Explain how an area model shows both multiplication and division.

Possible explanation: The numbers on the two sides are multiplied together to equal the total area. The total area can be divided by one of the side numbers to find the other side number.

Prepare for Dividing Three-Digit Numbers

- 1 Think about what you know about division. Fill in each box. Use words, numbers, and pictures. Show as many ideas as you can. **Possible answers:**

Word	In My Own Words	Example
division	An operation used to separate a number of objects into equal-sized groups	$12 \div 3 = 4$ 
dividend	The number that I divide into equal groups	$(20) \div 5 = 4$
divisor	The number I divide by in a division problem	$18 \div (3) = 6$
quotient	The result of division	$24 \div 8 = (3)$
remainder	The amount left over after I make equal groups	

- 2 Use the term *equal groups* to describe the division problem shown below.

$$123 \div 5 = 24 \text{ R } 3$$

Possible answer: When you separate 123 objects into 5 equal groups, there are 24 objects in each group and 3 objects left over.

- 3 Solve the problem. Show your work.

What is $68 \div 4$?

Possible student work:

$$68 = 60 + 8$$

$$4 \times 15 = 60$$

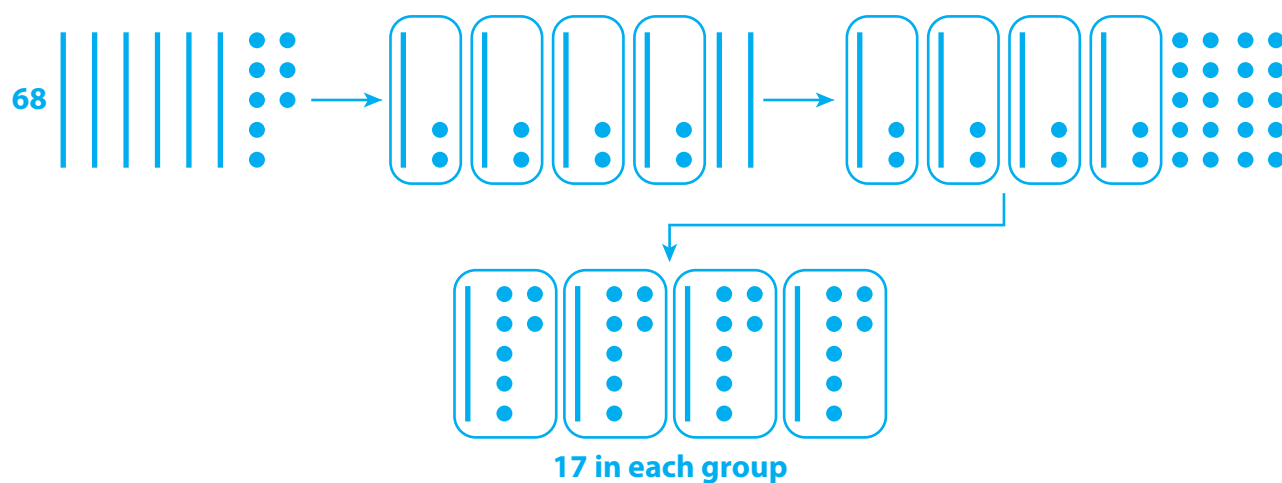
$$4 \times 2 = 8$$

$15 + 2 = 17$, so there are 17 groups of 4.

Solution $68 \div 4 = 17$

- 4 Check your answer. Show your work.

Possible student work:



$$68 \div 4 = 17$$

Develop Dividing with Arrays and Area Models

Read and try to solve the problem below.

What is $136 \div 4$?

TRY IT

Possible student work:

Sample A

$$136 = 100 + 36$$

$$100 = 4 \times 25 \text{ and } 36 = 4 \times 9$$

$$25 + 9 = 34$$

$$136 \div 4 = 34$$

Sample B

25	+	9	= 34
4	100	36	

$$136 \div 4 = 34$$



Math Toolkit

- base-ten blocks
- counters
- bowls
- paper plates
- grid paper
- multiplication models



DISCUSS IT

Ask your partner: Why did you choose that strategy?

Tell your partner: I do not understand how ...

Lesson 19

Sprint

Side A

1. 10	12. 21	23. 34	34. 17
2. 2	13. 1	24. 32	35. 10
3. 12	14. 20	25. 43	36. 20
4. 10	15. 21	26. 31	37. 15
5. 2	16. 1	27. 22	38. 18
6. 12	17. 20	28. 33	39. 10
7. 10	18. 21	29. 22	40. 13
8. 2	19. 8	30. 33	41. 15
9. 12	20. 10	31. 10	42. 20
10. 1	21. 12	32. 20	43. 19
11. 20	22. 14	33. 15	44. 17

Side B

1. 10	12. 31	23. 43	34. 16
2. 3	13. 1	24. 23	35. 10
3. 13	14. 30	25. 34	36. 20
4. 10	15. 31	26. 32	37. 15
5. 3	16. 2	27. 22	38. 19
6. 13	17. 10	28. 33	39. 10
7. 20	18. 12	29. 22	40. 12
8. 1	19. 10	30. 44	41. 14
9. 21	20. 12	31. 10	42. 20
10. 1	21. 14	32. 20	43. 18
11. 30	22. 16	33. 15	44. 16

4.NBT Mental Division Strategy

Alignments to Content Standards: 4.NBT.B.6

Task

Jillian says

I know that 20 times 7 is 140 and if I take away 2 sevens that leaves 126. So $126 \div 7 = 18$.

- Is Jillian's calculation correct? Explain.
- Draw a picture showing Jillian's reasoning.
- Use Jillian's method to find $222 \div 6$.

IM Commentary

This task would be ideal to help students develop mental strategies to think about division during instruction. Jillian's strategy is often referred to as using "compatible numbers." Jillian is using a relationship that she can easily find: 140 divided by 7 is 20 or 20 sets of 7 is 140. The numbers 140 and 7 are often called "compatible" because 14 is a multiple of 7 so Jillian could strategically use this fact to reason through her problem. This task could also be extended to ask students for other mental math strategies to find 126 divided by 7. Students might reason that 10 sets of 7 is 70 and 8 sets of 7 is 56. Since $70 + 56$ is 126, there are 18 sets of 7 in the number 126.

[Edit this solution](#)

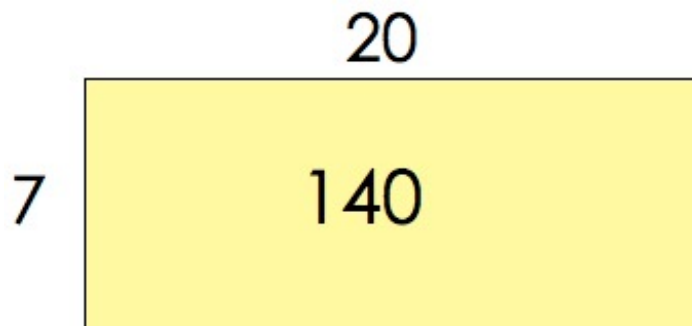
Solution

a. Jillian's reasoning is correct. She has found $20 \times 7 = 140$ and $2 \times 7 = 14$. This means that

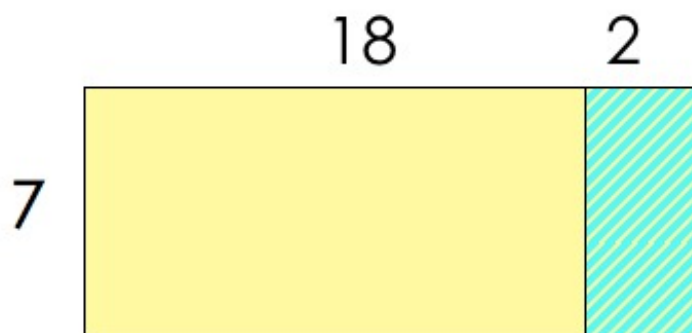
$$\begin{aligned} 18 \times 7 &= (20 - 2) \times 7 \\ &= (20 \times 7) - (2 \times 7) \\ &= 140 - 14 \\ &= 126. \end{aligned}$$

The second equality uses the distributive property. These equations tell us that $126 \div 7 = 18$.

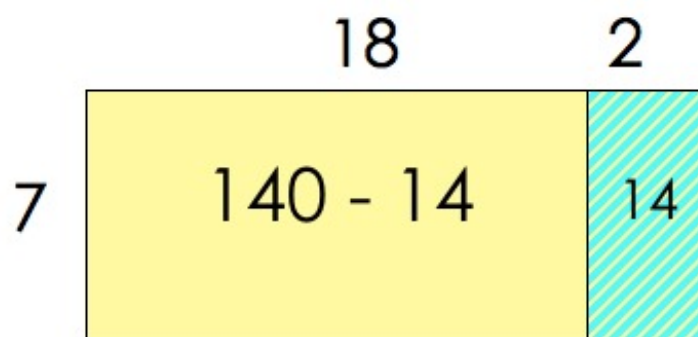
b. Jillian's initial idea of dividing 140 by 7 is represented here:



From there, Jillian decomposes the 20 sevens into 18 sevens and 2 sevens:



Lastly, Jillian recognizes that if the area of both rectangles combined would be 140, then she must subtract off the 2 extra sevens she used to get 140:



c. We have $40 \times 6 = 240$ and $3 \times 6 = 18$. So

$$\begin{aligned} 37 \times 6 &= (40 - 3) \times 6 \\ &= (40 \times 6) - (3 \times 6) \\ &= 240 - 18 \\ &= 222. \end{aligned}$$

The second line uses the distributive property of multiplication.



4.NBT Mental Division Strategy

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Dividing by One-Digit Numbers

What You Need

- 6 game markers in one color
- 6 game markers in a different color
- Recording Sheet and Game Board

What You Do

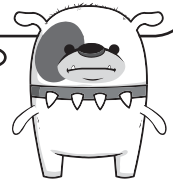
1. Take turns. Pick a problem on the **Recording Sheet**.
2. Divide. Write the quotient including the remainder.
3. Your partner uses multiplication to check the answer.
4. If your answer is correct, cover the remainder on the **Game Board** with your game marker. If it is incorrect, your turn ends.
5. Continue until all problems have been solved. The player with the greater number of game markers on the **Game Board** wins.

✓ Check Understanding

What is the quotient?

$$3,265 \div 4 = \underline{\hspace{2cm}}$$

The remainder must be less than the divisor. If it's not, I divide again.



Go Further!

On a separate sheet of paper, rewrite the dividend of the problem $342 \div 5$ so there is a remainder of 5. Use multiplication and addition to check your answer. Exchange papers with your partner to check.



Center Activity 4.25 ★★ Recording Sheet and Game Board

Partner A _____
Partner B _____

Dividing by One-Digit Numbers

$342 \div 5 =$ _____	$2,176 \div 6 =$ _____	$388 \div 3 =$ _____
$4,632 \div 9 =$ _____	$735 \div 8 =$ _____	$5,178 \div 7 =$ _____
$638 \div 2 =$ _____	$4,519 \div 4 =$ _____	$242 \div 9 =$ _____

3	6	0
7	2	1
5	8	4



Center Activity Answer Key

Activity 4.25

Dividing by One-Digit Numbers

Recording Sheet

Row 1: 68 R 2; 362 R 4; 129 R 1

Row 2: 514 R 6; 91 R 7; 739 R 5

Row 3: 319; 1,129 R 3; 26 R 8

Guidance for Experiential Learning Assignments - Science

Grade 4

Overview

- Your child will engage in activities to help them learn about weather and climate
 - Each lesson will begin with discussion questions to get students thinking about what they already know.
 - There will be activities that require students to observe, collect data and/or analyze experiences about the world around them.
 - Videos, charts, tables and photos are provided to help students use the science and engineering practices.
- Your child can talk about what they are learning, use drawings and write down answers or all of these modes. Because these lessons build on each other, it is important that your child writes or draws in their notebook as well as communicate their ideas verbally.
- Your child should have a notebook for science assignments
- Review the assignment materials in advance
- Review each assignment with your child before they begin. Allow them to ask for help if and when needed

Assignment #4

- A. **Weather versus Climate** – Indicate whether each statement below is about **weather** or **climate** (answers in parentheses)
- a. Winter is usually the coldest time of year (climate)
 - b. It is raining and 73°F outside (weather)
 - c. The sky is cloudy and it looks like it might rain (weather)
 - d. Our location gets about the same amount of precipitation each year (climate)
 - e. August is usually the hottest month of the year (climate)
 - f. It was very cold and windy outside this morning (weather)

C. Please make time to talk with your child about developing a severe weather plan using the resources included in their assignment material.