# BRIDGES®
## IN MATHEMATICS

# Grade 5 Unit 1 Module 1
# Practice Pages for Math at Home

The Bridges Second Edition Module Packets, available from the Home Learning Resources page of the Bridges Educator Site, are designed to provide a review of math topics that were covered in class prior to school closures. They are meant for teachers to send home, so students can continue to engage with key grade-level skills. The material in these packets includes exercises that can be completed by students at home with their families.

NAME | DATE

## 📓 You Choose

**1** Choose 15 of the problems below to solve.

| | | | | |
|---|---|---|---|---|
| $8 \times 5 =$ | $7 \times 7 =$ | $4 \times 6 =$ | $3 \times 8 =$ | $4 \times 7 =$ |
| $4 \times 9 =$ | $6 \times 7 =$ | $6 \times 8 =$ | $8 \times 4 =$ | $3 \times 6 =$ |
| $10 \times 4 =$ | $8 \times 10 =$ | $8 \times 9 =$ | $6 \times 11 =$ | $12 \times 10 =$ |
| $15 \times 4 =$ | $40 \times 6 =$ | $50 \times 8 =$ | $10 \times 9 =$ | $14 \times 9 =$ |
| $25 \times 4 =$ | $11 \times 9 =$ | $6 \times 12 =$ | $12 \times 9 =$ | $7 \times 60 =$ |
| $30 \times 6 =$ | $13 \times 8 =$ | $11 \times 5 =$ | $25 \times 8 =$ | $12 \times 8 =$ |

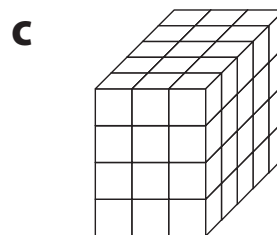**2** Explain how you decided which problems to solve.

**2**

# Facts & Boxes

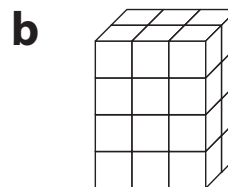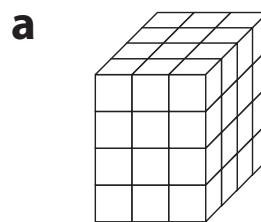**1** To multiply numbers by 5, Kaylee first multiplies by 10 and then finds half the product.

**a** Write an expression with parentheses to show how Kaylee would solve $9 \times 5$.

**b** What is $9 \times 5$?

**c** Marshall says he would rather use $10 \times 5$ to find $9 \times 5$.
Write an expression with parentheses that uses $10 \times 5$ to find $9 \times 5$.

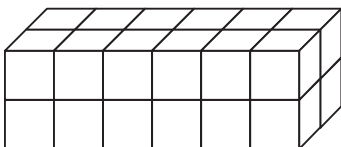Match each expression with the correct box.

**a**

**2** 4 layers of 3-by-5 cubes $(3 \times 5) \times 4$

**3** 4 layers of 3-by-2 cubes $(3 \times 2) \times 4$

**b**

**4** 4 layers of 3-by-4 cubes $(3 \times 4) \times 4$

**c**

**5** Fill in the dimensions of this box: (_____ × _____) × _____
                                        dimensions of each layer    number of
                                                                     layers

**6** Solve the following problems.

| 8 | 8 | 12 | 12 | 3 | 7 | |
|---|---|---|---|---|---|---|
| × 4 | × 8 | × 10 | × 5 | × 7 | × 6 | × 6 |
| | | | | | | 42 |

NAME _____ | DATE _____

## Fact Connections

**1** Fill in the facts. Look for relationships.

| 3 | 3 | 3 | 6 | 6 | 6 |
|---|---|---|---|---|---|
| × 2 | × 4 | × 8 | × 2 | × 4 | × 8 |

**2** Use the above information to help you fill in the blanks.

**a** $3 \times 4 =$ _____ $\times (3 \times 2) =$ _____

**b** $3 \times 8 =$ _____ $\times (3 \times 4) =$ _____

**c** $6 \times 2 = (3 \times 2) \times$ _____ $=$ _____

**d** $6 \times 4 = 2 \times (6 \times$ _____$) =$ _____

**e** $2 \times (6 \times 4) =$ _____ $\times 8 =$ _____

**3** Fill in the facts. Look for relationships.

| 4 | 4 | 4 | 8 | 8 | 8 |
|---|---|---|---|---|---|
| × 2 | × 4 | × 8 | × 2 | × 4 | × 8 |

**4** Use the above information to help you write an equation that includes parentheses.

**ex** $8 \times 4 = 2 \times (8 \times 2)$ "To find $8 \times 4$, I can double $8 \times 2$."

**a** $4 \times 6 =$

**b** $4 \times 12 =$

**c** $8 \times 8 =$

**5** **CHALLENGE** Complete the following equations.

**a** $4 \times 67 =$ _____ $\times (2 \times 67)$

**b** $8 \times 198 = 2 \times ($_____ $\times 198)$

**c** _____ $\times 3{,}794 = 2 \times (4 \times 3{,}794)$

## What's the Problem? page 1 of 2

**ex** To find 3 times any number, Maria doubles the number, then adds the number again.

**a** Write an expression with parentheses to show how Maria would solve 3 × 6.

(2 × 6) + 6

**b** What is 3 × 6? 18

**c** What is another way to think about 3 × 6?

You could do 3 × 5, which is really easy, and then add 3 more, like this (3 × 5) + 3

**1** To find 4 times any number, Susan uses the Double-Double strategy (multiply by 2, then by 2 again). Susan wrote (2 × 9) × 2 to record how she would solve 4 × 9.

**a** What is 4 × 9?

**b** What is another way to solve 4 × 9?

**2** To find 5 times any number, Kaylee first multiplies by 10 and then finds half the product.

**a** Write an expression with parentheses to show how Kaylee would solve 7 × 5.

**b** What is 7 × 5?

**c** What is another way to solve 7 × 5?

**3** When given any number times 9, Jasper multiplies the number by 10 and then removes one group of the number.

**a** Write an expression with parentheses to show how Jasper would solve 3 × 9.

**b** What is 3 × 9?

**c** What is another way to think about 3 × 9?

*(continued on next page)*

NAME |DATE

## What's the Problem? page 2 of 2

**4**  Braden loves multiplying by 8 because he can double-double-double.

**a**  Write an expression with parentheses to show how Braden would solve 8 × 7.

**b**  What is 8 × 7?

**c**  What is another way to think about 8 × 7?

**5**  Jonah was asked to add 4 and 7 then multiply the sum by 9. Which expression shows Jonah's problem? (The *sum* is the answer to an addition problem.)

**a**  (4 + 7) × 9          **b**  (7 − 4) × 9          **c**  4 + (7 × 9)

**6**  Patrick needed to multiply 4 and 6 then subtract 12 from the product. Write an expression with parentheses to show the problem. (The *product* is the answer to a multiplication problem.)

**7**  Violet divided 81 by 9 then multiplied the quotient by 3. Write an expression with parentheses to show the problem. (The *quotient* is the answer to a division problem.)

**8**  Solve.

**a**  54 − (3 × 8)                              **b**  (28 ÷ 7) × 4

**9**  **CHALLENGE**  Rafael was given the problem 44 × 9. Write an expression to show how you would solve the problem.

**NAME** _____ | **DATE** _____

## 🏠 Multiplication Connections page 1 of 2

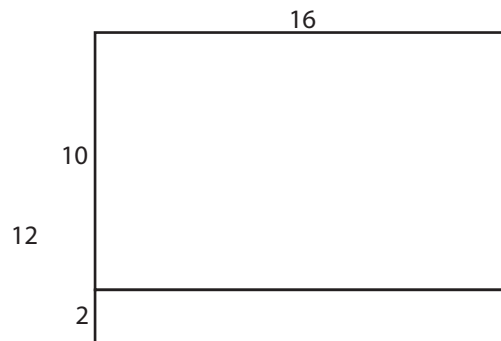**ex** To multiply a number by 5, Marissa first multiplies by 10 and then finds half the product.

> **ex** Write an expression with parentheses to show how Marissa would solve 24 × 5.
>
> (24 × 10) ÷ 2
>
> **ex** What is 24 × 5?
>
> 120

**1** To multiply a number by 12, Carter likes to multiply the number by 10 and then multiply it by 2 and add the products. Here is a picture of his thinking.



**a** Write an expression with parentheses to show how Carter would solve 12 × 16.


**b** What is 12 × 16? _____

**2** To multiply a number by 99, Sofia likes to multiply by 100 and then subtract 1 group of the factor. Here is a picture of her thinking.
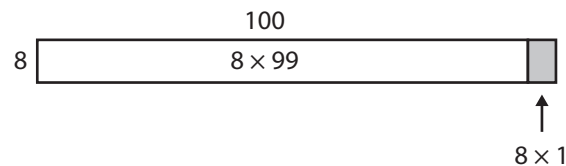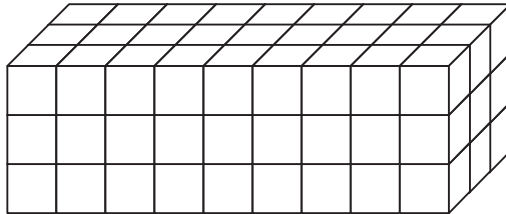


**a** Write an expression with parentheses to show how Sofia would solve 8 × 99.


**b** What is 8 × 99? _____

*(continued on next page)*

**NAME** _____ | **DATE** _____

## Multiplication Connections  page 2 of 2

**3**  Fill in the dimensions of this box: _____ × _____ × _____

**4**  Solve the following problems.

$$\begin{array}{c} 2 \\ \times\ 13 \\ \hline \phantom{00} \end{array} \qquad \begin{array}{c} 4 \\ \times\ 13 \\ \hline \phantom{00} \end{array} \qquad \begin{array}{c} 8 \\ \times\ 13 \\ \hline \phantom{00} \end{array} \qquad \begin{array}{c} 10 \\ \times\ 28 \\ \hline \phantom{00} \end{array} \qquad \begin{array}{c} 28 \\ \times\ 5 \\ \hline \phantom{00} \end{array} \qquad \begin{array}{c} 28 \\ \times\ 15 \\ \hline \phantom{00} \end{array} \qquad \begin{array}{c} 13 \\ \times\ \phantom{00} \\ \hline 52 \end{array}$$

**5**  Find the products.

**a**  $(2 \times 5) \times 8 = $ _____

**b**  $(2 \times 8) \times 5 = $ _____

**c**  $(5 \times 8) \times 2 = $ _____

**6**  Which of the problems in item 5 is the easiest for you to solve? In other words, in which order would you prefer to multiply the three factors? Why?

**7**  Find the products.

**a**  $(6 \times 7) \times 10 = $ _____

**b**  $(6 \times 10) \times 7 = $ _____

**c**  $(7 \times 10) \times 6 = $ _____

**8**  Which of the problems in item 7 is the easiest for you to solve? In other words, in which order would you prefer to multiply the three factors? Why?

4

# Answer Keys

**NAME** | **DATE**

## 📐 You Choose

**1** Choose 15 of the problems below to solve.

| | | | | |
|---|---|---|---|---|
| $8 \times 5 =$ <br><br>**40** | $7 \times 7 =$ <br><br>**49** | $4 \times 6 =$ <br><br>**24** | $3 \times 8 =$ <br><br>**24** | $4 \times 7 =$ <br><br>**28** |
| $4 \times 9 =$ <br><br>**36** | $6 \times 7 =$ <br><br>**42** | $6 \times 8 =$ <br><br>**48** | $8 \times 4 =$ <br><br>**32** | $3 \times 6 =$ <br><br>**18** |
| $10 \times 4 =$ <br><br>**40** | $8 \times 10 =$ <br><br>**80** | $8 \times 9 =$ <br><br>**72** | $6 \times 11 =$ <br><br>**66** | $12 \times 10 =$ <br><br>**120** |
| $15 \times 4 =$ <br><br>**60** | $40 \times 6 =$ <br><br>**240** | $50 \times 8 =$ <br><br>**400** | $10 \times 9 =$ <br><br>**90** | $14 \times 9 =$ <br><br>**126** |
| $25 \times 4 =$ <br><br>**100** | $11 \times 9 =$ <br><br>**99** | $6 \times 12 =$ <br><br>**72** | $12 \times 9 =$ <br><br>**108** | $7 \times 60 =$ <br><br>**420** |
| $30 \times 6 =$ <br><br>**180** | $13 \times 8 =$ <br><br>**104** | $11 \times 5 =$ <br><br>**55** | $25 \times 8 =$ <br><br>**200** | $12 \times 8 =$ <br><br>**96** |

**2** Explain how you decided which problems to solve.

**Explanations will vary.**

NAME | DATE

# ▨ Facts & Boxes

**1** To multiply numbers by 5, Kaylee first multiplies by 10 and then finds half the product.

**a** Write an expression with parentheses to show how Kaylee would solve $9 \times 5$.

**$(9 \times 10) \div 2$**

**b** What is $9 \times 5$?

**45**

**c** Marshall says he would rather use $10 \times 5$ to find $9 \times 5$.
Write an expression with parentheses that uses $10 \times 5$ to find $9 \times 5$.
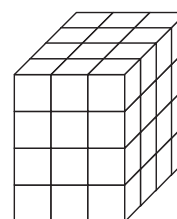
**$(10 \times 5) - (1 \times 5)$**

Match each expression with the correct box.

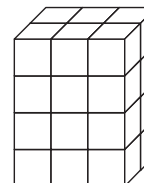**a**

**2** 4 layers of 3-by-5 cubes $(3 \times 5) \times 4$

**3** 4 layers of 3-by-2 cubes $(3 \times 2) \times 4$ **b**

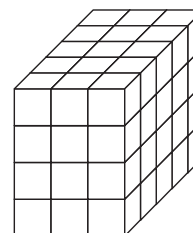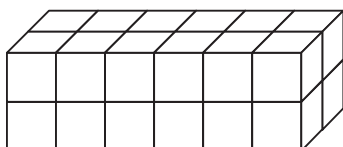**4** 4 layers of 3-by-4 cubes $(3 \times 4) \times 4$

**c**

**5** Fill in the dimensions of this box: (__**6**__ × __**2**__) × __**2**__

dimensions of each layer   number of layers

**6** Solve the following problems.

| 8 | 8 | 12 | 12 | 3 | 7 | 7 |
|---|---|---|---|---|---|---|
| × 4 | × 8 | × 10 | × 5 | × 7 | × 6 | × 6 |
| **32** | **64** | **120** | **60** | **21** | **42** | 42 |

**NAME** | **DATE**

# Fact Connections

**1** Fill in the facts. Look for relationships.

| 3 | 3 | 3 | 6 | 6 | 6 |
|---|---|---|---|---|---|
| × 2 | × 4 | × 8 | × 2 | × 4 | × 8 |
| **6** | **12** | **24** | **12** | **24** | **48** |

**2** Use the above information to help you fill in the blanks.

**a** $3 \times 4 = \underline{\textbf{2}} \times (3 \times 2) = \underline{\textbf{12}}$

**b** $3 \times 8 = \underline{\textbf{2}} \times (3 \times 4) = \underline{\textbf{24}}$

**c** $6 \times 2 = (3 \times 2) \times \underline{\textbf{2}} = \underline{\textbf{12}}$

**d** $6 \times 4 = 2 \times (6 \times \underline{\textbf{2}}) = \underline{\textbf{24}}$

**e** $2 \times (6 \times 4) = \underline{\textbf{6}} \times 8 = \underline{\textbf{48}}$

**3** Fill in the facts. Look for relationships.

| 4 | 4 | 4 | 8 | 8 | 8 |
|---|---|---|---|---|---|
| × 2 | × 4 | × 8 | × 2 | × 4 | × 8 |
| **8** | **16** | **32** | **16** | **32** | **64** |

**4** Use the above information to help you write an equation that includes parentheses.

**ex** $8 \times 4 = 2 \times (8 \times 2)$ "To find $8 \times 4$, I can double $8 \times 2$."

**Equations may vary. Examples shown:**

**a** $4 \times 6 = \textbf{2} \times \textbf{(2} \times \textbf{6)}$

**b** $4 \times 12 = \textbf{2} \times \textbf{(4} \times \textbf{6)}$

**c** $8 \times 8 = \textbf{2} \times \textbf{(8} \times \textbf{4)}$

**5** CHALLENGE Complete the following equations.

**a** $4 \times 67 = \underline{\textbf{2}} \times (2 \times 67)$

**b** $8 \times 198 = 2 \times (\underline{\textbf{4}} \times 198)$

**c** $\underline{\textbf{8}} \times 3,794 = 2 \times (4 \times 3,794)$

## What's the Problem? page 1 of 2

**ex** To find 3 times any number, Maria doubles the number, then adds the number again.

**a** Write an expression with parentheses to show how Maria would solve $3 \times 6$.

$(2 \times 6) + 6$

**b** What is $3 \times 6$? 18

**c** What is another way to think about $3 \times 6$?

You could do $3 \times 5$, which is really easy, and then add 3 more, like this $(3 \times 5) + 3$

**1** To find 4 times any number, Susan uses the Double-Double strategy (multiply by 2, then by 2 again). Susan wrote $(2 \times 9) \times 2$ to record how she would solve $4 \times 9$.

**a** What is $4 \times 9$? **36**

**b** What is another way to solve $4 \times 9$? **Work will vary. Example:**
**$(4 \times 4) + (4 \times 5) = 16 + 20 = 36$**

**2** To find 5 times any number, Kaylee first multiplies by 10 and then finds half the product.

**a** Write an expression with parentheses to show how Kaylee would solve $7 \times 5$.
**$(7 \times 10) \div 2$ (may vary slightly)**

**b** What is $7 \times 5$? **35**

**c** What is another way to solve $7 \times 5$? **Work will vary. Example:**
**$(5 \times 5) + (2 \times 5) = 25 + 10 = 35$**

**3** When given any number times 9, Jasper multiplies the number by 10 and then removes one group of the number.

**a** Write an expression with parentheses to show how Jasper would solve $3 \times 9$.
**$(3 \times 10) - 3$ (may vary slightly)**

**b** What is $3 \times 9$? **27**

**c** What is another way to think about $3 \times 9$?
**Work will vary. Example:**
**$(3 \times 5) + (3 \times 4) = 15 + 12 = 27$**

*(continued on next page)*

1

NAME | DATE

## What's the Problem? page 2 of 2

**4** Braden loves multiplying by 8 because he can double-double-double.

**a** Write an expression with parentheses to show how Braden would solve $8 \times 7$.
**$((7 \times 2) \times 2) \times 2$**

**b** What is $8 \times 7$? **56**

**c** What is another way to think about $8 \times 7$? **Work will vary. Example: $(4 \times 7) \times 2$**

**5** Jonah was asked to add 4 and 7 then multiply the sum by 9. Which expression shows Jonah's problem? (The *sum* is the answer to an addition problem.)

**a** $(4 + 7) \times 9$ **b** $(7 - 4) \times 9$ **c** $4 + (7 \times 9)$

**6** Patrick needed to multiply 4 and 6 then subtract 12 from the product. Write an expression with parentheses to show the problem. (The *product* is the answer to a multiplication problem.) **Example: $(4 \times 6) - 12$**

**Note: parentheses are not required due to order of operations. Students may omit them.**

**7** Violet divided 81 by 9 then multiplied the quotient by 3. Write an expression with parentheses to show the problem. (The *quotient* is the answer to a division problem.)

**Example: $(81 \div 9) \times 3$ Note: parentheses are not required due to order of operations. Students may omit them.**

**8** Solve.

**a** $54 - (3 \times 8)$
**30**

**b** $(28 \div 7) \times 4$
**16**

**9** **CHALLENGE** Rafael was given the problem $44 \times 9$. Write an expression to show how you would solve the problem.
**Work will vary. Example: $(44 \times 10) - (44 \times 1) = 440 - 44 = 396$**

**NAME** _____ | **DATE** _____

### 🏠 Multiplication Connections page 1 of 2

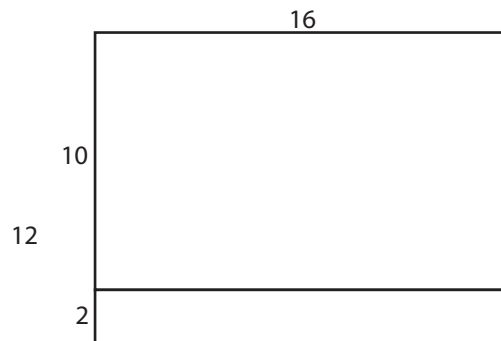**ex** To multiply a number by 5, Marissa first multiplies by 10 and then finds half the product.

> **ex** Write an expression with parentheses to show how Marissa would solve $24 \times 5$.
> $(24 \times 10) \div 2$
>
> **ex** What is $24 \times 5$?
> 120

**1** To multiply a number by 12, Carter likes to multiply the number by 10 and then multiply it by 2 and add the products. Here is a picture of his thinking.
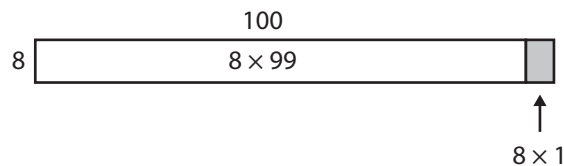


> **a** Write an expression with parentheses to show how Carter would solve $12 \times 16$.
> **Example: $(16 \times 10) + (16 \times 2)$**
>
> **b** What is $12 \times 16$? **192**

**2** To multiply a number by 99, Sofia likes to multiply by 100 and then subtract 1 group of the factor. Here is a picture of her thinking.



> **a** Write an expression with parentheses to show how Sofia would solve $8 \times 99$.
> **Example: $(8 \times 100) - (8 \times 1)$**
>
> **b** What is $8 \times 99$? **792**

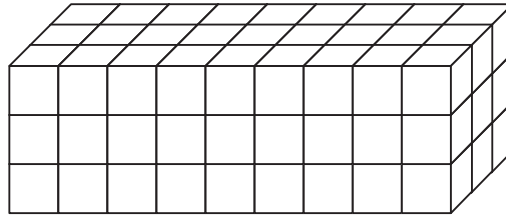*(continued on next page)*

NAME                                                                                    | DATE

## Multiplication Connections  page 2 of 2

**3**  Fill in the dimensions of this box: ___**3**___ × ___**3**___ × ___**9**___

**Note: Students may record the dimensions in any order.**

**4**  Solve the following problems.

| 2 | 4 | 8 | 10 | 28 | 28 | 13 |
|---|---|---|---|---|---|---|
| × 13 | × 13 | × 13 | × 28 | × 5 | × 15 | × **4** |
| **26** | **52** | **104** | **280** | **140** | **420** | 52 |

**5**  Find the products.

**a**  $(2 \times 5) \times 8 =$ __**80**__      **b**  $(2 \times 8) \times 5 =$ __**80**__      **c**  $(5 \times 8) \times 2 =$ __**80**__

**6**  Which of the problems in item 5 is the easiest for you to solve? In other words, in which order would you prefer to multiply the three factors? Why?
   **Responses will vary.**

**7**  Find the products.

**a**  $(6 \times 7) \times 10 =$ __**420**__      **b**  $(6 \times 10) \times 7 =$ __**420**__      **c**  $(7 \times 10) \times 6 =$ __**420**__

**8**  Which of the problems in item 7 is the easiest for you to solve? In other words, in which order would you prefer to multiply the three factors? Why?
   **Responses will vary.**

**4**