School-Home Letter

Dear Family,

During the next few weeks, our math class will be learning about multiplication and division concepts and facts. This includes exploring the relationship between multiplication and division through different models. We will also learn about patterns in the multiplication table.

You can expect to see homework that provides practice with multiplication and division.

Here is a sample of how your child will be taught to relate multiplication and division.

🔑 MODEL Relate Multiplication and Division

This is one example of how we will be relating the inverse, or opposite, operations of multiplication and division.

Fact Family for 3, 4, and 12								
factor		factor		product	dividend		divisor		quotient
3	×	4	=	12	12	÷	3	=	4
4	×	3	=	12	12	÷	4	=	3

Vocabulary

multiply To combine equal groups to find how many in all; the opposite operation of division

divide To separate into equal groups; the opposite of multiplication

fact family A set of related multiplication and division sentences, or addition and subtraction sentences

inverse operations Operations that undo each other. Multiplication and division are inverse operations.

Tips

Patterns on the Multiplication Table

When making a multiplication table through 9, patterns and strategies only need to be used to find 55 of the 100 products. Because the Commutative Property of Multiplication states that the order of the factors does not change the product (2 × 8 is the same as 8 × 2, and so on) the other 45 products can be filled in using facts already discovered.

Carta para la casa

Querida familia,

Durante las próximas semanas en la clase de matemáticas aprenderemos sobre las operaciones y conceptos de multiplicación y división. Esto incluye la relación entre la multiplicación y la división a través de diferentes modelos. También aprenderemos sobre los patrones en la tabla de multiplicación.

Llevaré a la casa tareas con actividades para practicar la multiplicación y la división.

Este es un ejemplo de la manera como aprenderemos a relacionar la multiplicación con la división.

Vocabulario

multiplicar Unir grupos iguales para hallar cuántos hay en total. Es lo contrario de la división.

dividir Separar en grupos iguales. Es lo contrario de la multiplicación.

familia de operaciones Un conjunto de enunciados de multiplicación y división o de suma y resta, que muestran operaciones relacionadas.

operaciones inversas Operaciones que se anulan la una a la otra. La multiplicación y la división son operaciones inversas.

🔐 MODELO Relacionar la multiplicación con la división

Este es un ejemplo de cómo relacionaremos las operaciones inversas, u opuestas, de multiplicación y división.

Familia de operaciones para 3, 4 y 12								
factor		factor		producto	dividendo		divisor		cociente
3	×	4	=	12	12	÷	3	=	4
4	×	3	=	12	12	÷	4	=	3

Pistas

Patrones en la tabla de multiplicación

Cuando se crea una tabla de multiplicación hasta 9, los patrones y las estrategias solo se deben usar para hallar 55 de los 100 productos. Dado que la propiedad conmutativa de la multiplicación afirma que el orden de los factores no altera el producto (2×8 es lo mismo que 8×2, y así sucesivamente) los otros 45 productos se pueden llenar usando las operaciones ya halladas.

ALGEBRA
Lesson 1

Relate Operations

MA.4.A.1.1 Use and describe various models for multiplication in problem-solving situations, and demonstrate recall of basic multiplication and related division facts with ease.

Write the related multiplication or division sentence.
Draw a quick picture that shows the sentence.

1. $3 + 3 + 3 + 3 = 12$

$$4 \times 3 = 12$$

2. $18 - 6 - 6 - 6 = 0$

_____

3. 5 groups of 5 equals 25

_____

4. 24 among 4 groups equals 6

_____

5. $7 + 7 + 7 = 21$

_____

6. $32 - 8 - 8 - 8 - 8 = 0$

_____

7. $36 - 9 - 9 - 9 - 9 = 0$

_____

8. 4 groups of 7 equals 28

_____

9. $8 + 8 + 8 = 24$

_____

Problem Solving REAL WORLD

10. Courtney is pouring 18 cups of lemonade into glasses. Each glass holds 2 cups of lemonade. How many glasses will Courtney fill?

_____

11. It costs 6 tickets to ride the Ferris Wheel. The ride operator collected tickets from 7 children. How many tickets did she collect in all?

_____

Lesson Check (MA.4.A.1.1)

1. Which of these is another way to write
   $9 + 9 + 9 + 9 = 36$?

   (A) $36 ÷ 4 = 9$

   (B) $9 × 4 = 36$

   (C) $4 + 9 = 13$

   (D) $36 ÷ 6 = 6$

2. Martin has 18 craft sticks for making puppets. Each puppet is made with 3 craft sticks. How many puppets can Martin make?
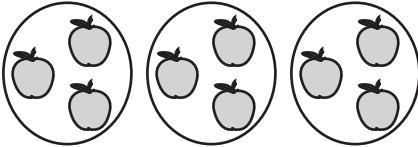
   (F) 3

   (G) 6

   (H) 9

   (I) 15

Review Grade 4 (MA.4.A.6.1)

3. What is the value of the digit 7 in the number 37,894,120?

   (A) 7

   (B) 7,000

   (C) 7,000,000

   (D) 70,000,000

4. How many ten thousands are in 1,000,000?

   (F) 10

   (G) 100

   (H) 1,000

   (I) 10,000

Look Back (MA.3.A.1.1, MA.4.A.1.1)

5. Which of the following is another way to represent the model below?

   (A) $3 × 3 = 9$

   (B) $4 + 5 = 9$

   (C) $3 × 3 × 3 = 27$

   (D) $4 + 4 + 4 = 12$

6. Tomas has a rope that is 10 feet long. He cuts the rope into 2-foot sections. How many sections of rope does Tomas make?

   (F) 2

   (G) 5
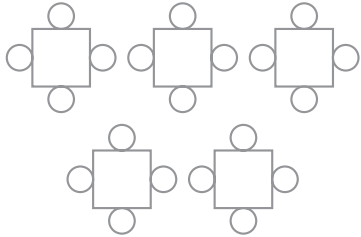
   (H) 8

   (I) 10

Name _____

Model Equal Groups

MA.4.A.1.1 Use and describe various models for multiplication in problem-solving situations, and demonstrate recall of basic multiplication and related division facts with ease.

Draw a quick picture to find the product or quotient.

1. $5 \times 4 = \underline{\textbf{20}}$

2. $21 \div 3 = \underline{\hspace{2cm}}$

3. $\begin{array}{r} 2 \\ \times\ 7 \\ \hline \end{array}$

4. $28 \div 4 = \underline{\hspace{2cm}}$

5. $\begin{array}{r} 5 \\ \times\ 3 \\ \hline \end{array}$

6. $8 \times 0 = \underline{\hspace{2cm}}$

7. $6 \div 1 = \underline{\hspace{2cm}}$

8. $18 \div 3 = \underline{\hspace{2cm}}$

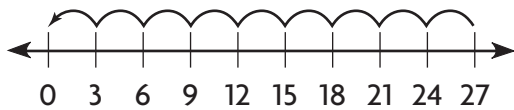**9.** $8 \times 4 = \underline{\hspace{2cm}}$

Problem Solving REAL WORLD

10. Isaiah has 8 goody bags for his party. He puts 5 party favors in each bag. How many party favors are there in all?

_____

11. There are 16 swings in all at the park. Each swing set has 4 swings on it. How many swing sets are there at the park?

_____

Lesson Check (MA.4.A.1.1)

1. Which problem is represented by the model below?

0 3 6 9 12 15 18 21 24 27

Ⓐ $3 \times 9 = 27$

Ⓑ $27 - 9 = 18$

Ⓒ $27 \div 3 = 9$

Ⓓ $27 - 18 = 9$

2. Hon places 4 pickle slices on each of 6 hamburgers. How many pickle slices does Hon use in all?

Ⓕ 6

Ⓖ 12

Ⓗ 18

Ⓘ 24

Review Grade 4 (MA.4.A.6.1)

3. What is four hundred three million, eighty-six thousand, one hundred seventeen written in standard form?

Ⓐ 43,086,117

Ⓑ 43,860,117

Ⓒ 403,086,117

Ⓓ 403,806,117

4. Which of the following shows another way to write the number 62,307,040?

Ⓕ 62 millions 37 thousands 40 ones

Ⓖ sixty-two million, three hundred seven thousand, four

Ⓗ $60,000,000 + 2,000,000 + 300,000 + 7,000 + 40$

Ⓘ $62 + 307 + 40$
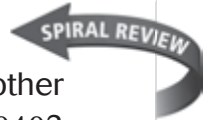
Look Back (MA.3.A.1.1, MA.4.A.1.1)

5. If 1 group of 4 equals 4, 2 groups of 4 equals 8, and 3 groups of 4 equal 12, how many does 4 groups of 4 equal?

Ⓐ 16

Ⓑ 14

Ⓒ 8

Ⓓ 4

6. Devon has 15 fruit snacks. He gives 5 to Debbie and 5 to Larry. How many fruit snacks does Devon have left to give to Brandon?

Ⓕ 0

Ⓖ 3

Ⓗ 5

Ⓘ 10

Name _____

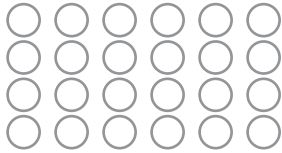# Model Arrays and Area Models

Draw a quick picture to find the product or quotient.

1. $24 \div 4 =$ __**6**__

2. $9 \times 3 =$ _____

3. $5\overline{)30}$

4. $\begin{array}{r} 8 \\ \times\ 2 \\ \hline \end{array}$

5. $4 \div 4 =$ _____

6. $3 \times 2 =$ _____

7. $5\overline{)20}$

8. $\begin{array}{r} 3 \\ \times\ 0 \\ \hline \end{array}$

9. $40 \div 5 =$ _____

Problem Solving REAL WORLD

10. One page of Jenna's baseball card album holds 25 cards. There are 5 cards in each row. How many rows of cards are there?

_____

11. Louisa knits a pattern in her scarf that is 8 stitches long and 4 rows high. How many total stitches are in the pattern?

_____

Lesson Check (MA.4.A.1.1)

1. Carly places 7 books on each of 4 shelves in her bedroom. How many books in all are on the shelves?

   (A) 32   (C) 24

   (B) 28   (D) 21

2. Tyrone draws a map of his neighborhood that covers 35 square blocks. The map is 5 blocks wide. How many blocks long is the map?

   (F) 5   (H) 7

   (G) 6   (I) 8

Review Grade 4 (MA.4.A.6.1)

3. A web page had over 100,000,000 visitors. Which words mean 100,000,000?
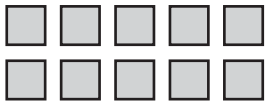
   (A) one thousand

   (B) one hundred thousand

   (C) one million

   (D) one hundred million

4. Which number has a 5 in the ten millions place?

   (F) 850,249

   (G) 65,029,438

   (H) 158,002,634

   (I) 560,231,717

Look Back (MA.3.A.1.1, MA.4.A.1.1)

5. Which multiplication sentence does the array show?

   (A) $2 \times 5 = 10$

   (B) $5 + 2 = 7$

   (C) $2 \times 4 = 8$

   (D) $4 \times 2 = 8$

6. Reese made a design for her mom using 12 tiles. She used 4 tiles in each row. How many rows of tiles does the design have?

   (F) 2

   (G) 3

   (H) 4

   (I) 8

Relate Multiplication and Division

MA.4.A.1.1 Use and describe various models for multiplication in problem-solving situations, and demonstrate recall of basic multiplication and related division facts with ease.

Write the related multiplication and division sentences to complete the fact family.

1. $3 \times 6 = 18$

$6 \times 3 = 18$
$18 \div 6 = 3,$
$18 \div 3 = 6$

2. $28 \div 4 = 7$

_____

_____

_____

3. $9 \div 9 = 1$

_____

_____

_____

4. $8 \times 2 = 16$

_____

_____

_____

5. $20 \div 4 = 5$

_____

_____

_____

6. $3 \times 9 = 27$

_____

_____

_____

Find the product or quotient.

7. $7 \times 2 =$ _____

8. $24 \div 3 =$ _____

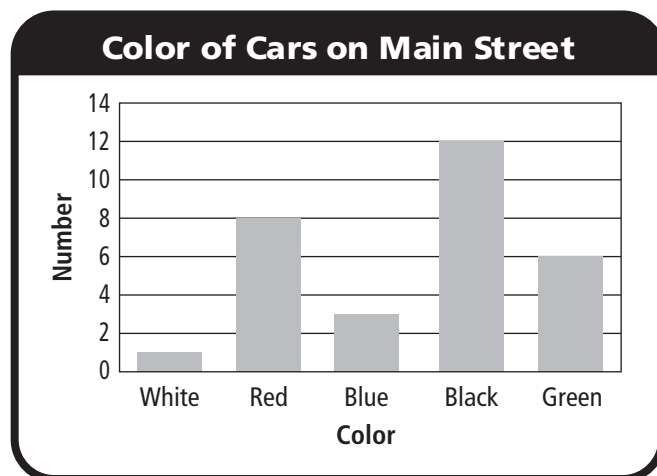**9.** _____ $= 16 \div 4$

10. $3 \times 1 =$ _____

11. $36 \div 4 =$ _____

12. _____ $= 7 \div 7$

13. $5 \times 6 =$ _____

14. _____ $= 4 \times 2$

Problem Solving REAL WORLD

Use the graph below for 15 and 16.

Color of Cars on Main Street

Number

14
12
10
8
6
4
2
0

White   Red   Blue   Black   Green

Color

15. There are 8 times as many red cars as white cars. Write a multiplication problem to show this.

_____

16. There are 4 times as many of which color car as there are blue cars on Main Street?

_____

Lesson Check (MA.4.A.1.1)

1. Which of the following is the fact family for the numbers 5, 8, and 40?
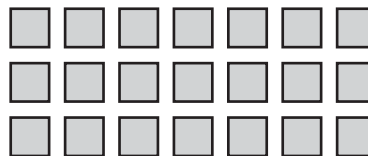
(A) $5 \times 40 = 8$, $8 \times 40 = 5$, $40 \div 8 = 5$, $40 \div 5 = 8$

(B) $5 \times 8 = 40$, $8 \times 5 = 40$, $8 - 5 = 3$, $40 - 8 = 32$

(C) $5 \times 8 = 40$, $8 \times 5 = 40$, $40 \div 8 = 5$, $40 \div 5 = 8$

(D) $5 \times 40 = 200$, $40 \times 5 = 200$, $40 - 5 = 35$, $40 - 8 = 32$

2. Tess made the following array to find the product of 3×7.

She can use the array to find the quotient of $21 \div 3$. What is the quotient?
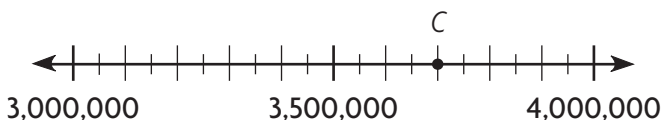
(F) 3   (H) 9

(G) 7   (I) 21

Review Grade 4 (MA.4.A.6.1)

3. Which number is represented by point *C* in the number line below?

C

3,000,000   3,500,000   4,000,000

(A) 3,700,000   (C) 3,600,000

(B) 3,650,000   (D) 3,550,000

4. Between which two numbers is 48,603,291?

(F) 47,000,000 and 48,000,000

(G) 47,500,000 and 48,500,000

(H) 48,000,000 and 49,000,000

(I) 49,000,000 and 50,000,000

Look Back (MA.3.A.1.1, MA.4.A.1.1)

5. Which of the following shows multiplication by 3?

(A) OOO   OO

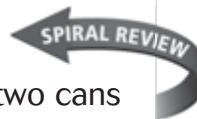(B) OOO   OOO   OOOO

(C) OOOO   OOOO

(D) OOO   OOO   OOO

6. Erica has 3 dogs. Each dog eats two cans of dog food each day. How many cans of dog food do Erica's dogs eat in all each day?

(F) 3

(G) 5

(H) 6

(I) 9

Name _____

Use Multiplication and Division Strategies

Find the product or quotient. Write the strategy you used.
Write *model, break apart, multiplication table, inverse operations,*
pattern, **or** *doubles.*

1. $9 \times 6 =$ __54__

doubles

6 = 3 + 3
9 × 3 = 27
9 × 3 = 27
27 + 27 = 54

2. $56 \div 7 =$ _____

_____

3. $7\overline{)42}$

_____

4. _____ $= 9 \times 9$

_____

5. _____ $= 36 \div 9$

_____

6. $7\overline{)49}$

_____

7. $40 \div 8 =$ _____

_____

8. _____ $= 3 \times 6$

_____

9. $\begin{array}{r} 8 \\ \times\ 4 \\ \hline \end{array}$

_____

10. $\begin{array}{r} 0 \\ \times\ 7 \\ \hline \end{array}$

_____

11. _____ $= 8 \times 6$

_____

12. $9\overline{)9}$

_____

Problem Solving REAL WORLD

13. Randy has a piece of rope that is 36 feet long. He wants to cut it into 6 equal pieces to make jump ropes for his friends. How long will each rope be?

_____

14. Bailey buys 7 sheets of stickers. Each sheet has 2 rows of stickers with 3 stickers in each row. How many stickers does Bailey buy in all?

_____

Lesson Check (MA.4.A.1.1)

1. Which expression is represented by the model below?

4   5

5   5
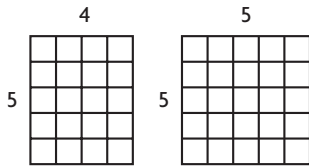
(A) $5 + 9$

(B) $5 \times (4 \times 5)$

(C) $(5 + 4) \times (5 + 5)$

(D) $(5 \times 4) + (5 \times 5)$

2. Molly uses the doubles strategy to find the product of 8×7. Which of the following could Molly use to find the product?

(F) $4 + 4 + 7$

(G) $(4 \times 7) + (4 \times 7)$

(H) $(4 \times 7) + 7$

(I) $(4 \times 7) + (4 + 7)$

Review Grade 4 (MA.4.A.6.1)

3. Which number is 48,326,908 rounded to the nearest million?

(A) 40,000,000   (C) 49,000,000

(B) 48,000,000   (D) 50,000,000

4. Elliot wants to round the number 357,024,169 to the nearest ten million. Which digit should he use to determine how to round?

(F) 3   (H) 7

(G) 5   (I) 9

Look Back (MA.3.A.1.1, MA.4.A.1.1)

5. Two tiles on the cafeteria wall have a star design on them as seen below.

Which expression can be used to find the total number of stars on the tiles?

(A) 2×2 (C) $2 + 2$

(B) 2×9 (D) $2 + 9$

6. Kayla bakes 24 cupcakes. She can bake 8 cupcakes in each batch. How many batches of cupcakes will Kayla make?

(F) 8

(G) 4

(H) 3

(I) 2

Name _____

Multiplication Table Through 9

Find the product or quotient.

1. $72 \div 8 =$ __9__

2.
$$\begin{array}{r} 7 \\ \times\ 6 \\ \hline \end{array}$$

3. $8\overline{)40}$

4. $6 \times 4 =$ _____

5. $9\overline{)63}$

6. _____ $= 5 \times 7$

7. $36 \div 6 =$ _____

8.
$$\begin{array}{r} 9 \\ \times\ 4 \\ \hline \end{array}$$

9. $7 \times 7 =$ _____

10. $8\overline{)56}$

11.
$$\begin{array}{r} 2 \\ \times\ 3 \\ \hline \end{array}$$

12. _____ $= 54 \div 6$

Problem Solving REAL WORLD

Use the multiplication table for 13–14.

×	0	1	2	3	4	5	6	7	8	9
0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9
2	0	2	4	6	8	10	12	14	16	18
3	0	3	6	9	12	15	18	21	24	27
4	0	4	8	12	16	20	24	28	32	36
5	0	5	10	15	20	25	30	35	40	45
6	0	6	12	18	24	30	36	42	48	54
7	0	7	14	21	28	35	42	49	56	63
8	0	8	16	24	32	40	48	56	64	72
9	0	9	18	27	36	45	54	63	72	81

13. Jon says the products in the column for 8 are twice the products in the column for 4. Kate says the products in the column for 8 are four more than the products in the column for 4. Who is correct?

_____

14. In which two columns and rows can you find the product 63?

_____

_____

_____

Lesson Check (MA.4.A.1.1)

1. Benji looked down the column for 7 in a multiplication table and found the product 42. In which row of the table would the product that Benji found be located?

   (A) row 6   (C) row 8

   (B) row 7   (D) row 9

2. In which column of a multiplication table is every product the same?

   (F) column 9

   (G) column 5

   (H) column 1

   (I) column 0

Review Grade 4 (MA.4.A.6.1)

SPIRAL REVIEW

3. Wendy is thinking of a 7-digit number. The digit in the hundred thousands place is twice the digit in the tens place. The digit in the thousands place is one more than the digit in the millions place. Which could be Wendy's number?

   (A) 1,462,031

   (B) 2,653,827

   (C) 3,414,620

   (D) 4,823,945

4. Sabrina is thinking of an 8-digit number. The digit in the ten millions place is three times the digit in the ones place. The digit in the ones place is three more than the digit in the millions place. Which of the following could be Sabrina's number?

   (F) 34,895,621

   (G) 26,654,329

   (H) 61,690,222

   (I) 90,762,803

Look Back (MA.3.A.1.1, MA.4.A.1.1)

SPIRAL REVIEW
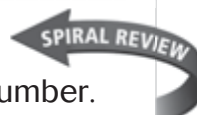
5. Anthony buys 5 packages of bouncy balls. Each package holds 4 balls. Anthony wants to divide the balls equally among himself and 3 friends. How many balls will each get?

   (A) 20

   (B) 5

   (C) 4

   (D) 1

6. Which of the following shows the inverse operation of $3 \times 4 = 12$?

   (F) $12 - 4 = 8$

   (G) $3 + 4 = 7$

   (H) $12 \div 4 = 3$

   (I) $4 \times 3 = 12$

Name _____

Patterns in the Multiplication Table

Find the square number.

1. $6 \times 6 =$ **36**   **2.** $3 \times 3 =$ _____   **3.** _____ $= 8 \times 8$ **4.** $1 \times 1 =$ _____

5. $7 \times 7 =$ _____   **6.** _____ $= 2 \times 2$ **7.** $9 \times 9 =$ _____   **8.** $4 \times 4 =$ _____

Use a multiplication table.

9. Which pattern do you see in the multiples of 9?

_____

_____

_____

10. Which pattern do you see in the multiples of 1?

_____

_____

_____

Problem Solving REAL WORLD

Use the Facts of Eight table for 11–12.

Facts of Eight
$1 \times 8 = 8$
$2 \times 8 = 16$
$3 \times 8 = 24$
$4 \times 8 = 32$
$5 \times 8 = 40$
$6 \times 8 = 48$
$7 \times 8 = 56$
$8 \times 8 = 64$
$9 \times 8 = 72$

11. What is the pattern in the ones place of the products?

_____

_____

_____

12. Based on the pattern, what would be the ones digit in the product 12×8?

_____

Lesson Check (MA.4.A.6.4)

1. Jason wants to make a square design using 25 number cubes. How many number cubes will be in each row and each column?

   (A) 4 (C) 6
   (B) 5 (D) 7

2. Multiples of which of the following sets of numbers are always even?

   (F) 2, 5, 10 (H) 2, 3, 4, 5
   (G) 3, 5, 7, 9 (I) 2, 4, 6, 8

Review Grade 4 (MA.4.A.6.1)

3. A football stadium seats about 100,000 people. It cost about $950,000 to build. The stadium has 44 sections. Over 35 million fans have come through the gates since it first opened.

   Which number in the situation above is an exact amount?

   (A) 44 (C) $950,000
   (B) 100,000 (D) 35 million

4. A number when rounded to the ten millions place rounds to 30,000,000. When the number is rounded to the millions place, it rounds to 26,000,000. Which of the following could the number be?

   (F) 28,389,035 (H) 25,803,672
   (G) 26,780,143 (I) 25,412,905

Look Back (MA.3.A.6.2, MA.4.A.6.4)

5. Helen made the following multiplication facts table for the number 3 using facts that she knows.

Facts of Three
$1 \times 3 = 3$
$2 \times 3 = 6$
$3 \times 3 = 9$
$4 \times 3 = 12$

   Based on her table, what can Helen predict the product of 6×3 will be?

   (A) 14 (C) 18
   (B) 15 (D) 21

6. Conner puts 2 pennies in his bank on the first day. The second day he puts 4 pennies in his bank. The third day he puts 6 pennies in his bank. If Conner continues the pattern, how many pennies will he put in his bank on the seventh day?

   (F) 7
   (G) 8
   (H) 12
   (I) 14

Draw a Diagram • Multiplication and Division

MA.4.A.1.1 Use and describe various models for multiplication in problem-solving situations, and demonstrate recall of basic multiplication and related division facts with ease.

Draw a diagram to help you solve the problems.

1. Sahara is 3 times as old as Rob. Their ages together add up to 16. How old is Sahara?

Sahara ☐☐☐
Rob ☐

12 years old

2. George read 6 times as many books this summer as Brent. Together, they read 21 books over the summer. How many books did Brent read this summer?

_____

3. Juan, Steve, and Gabriella bought a total of 30 markers at an art store. Juan bought 3 more markers than Steve. Gabriella bought 7 times as many markers as Steve. How many markers did each buy?

_____

4. Mr. Wong left his house and drove north for 5 blocks, then turned right and drove 6 blocks, then turned south and drove 2 more blocks. Finally, he turned right again and drove one more block to end up at the library. How many blocks east of Mr. Wong's house is the library?

_____

5. A bakery offers 3 different flavors and 2 different fillings for their layer cakes. How many different combinations of layer cake does the bakery offer?

_____

Lesson Check (MA.4.A.1.1)

1. Bonnie went to a farm and counted 4 times as many chickens as cows. She counted 15 chickens and cows all together. How many chickens did Bonnie count?

   (A) 3   (C) 12

   (B) 9   (D) 15

2. Joel ate twice as much pizza as Abigail. Travis ate one less piece of pizza than Abigail. All three friends ate a total of 7 pieces of pizza. How many pieces of pizza did Joel eat?

   (F) 1   (H) 3

   (G) 2   (I) 4

Review Grade 4 (MA.4.A.1.1)

SPIRAL REVIEW

Use the pictograph for 3–4.

The pictograph below shows the number of apples picked by three students on a field trip to Sunny Orchards.

Apples Picked at Sunny Orchards	
Jiang	🍎 🍎
Natasha	🍎 🍎 🍎 🍎 🍎
Susan	🍎 🍎 🍎

Key: Each 🍎 = 4 apples.
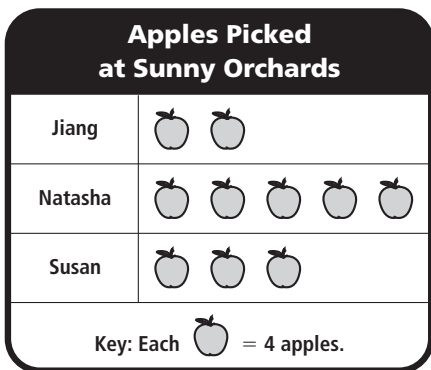
3. How many apples did Jiang and Natasha pick in all?

   (A) 7   (C) 28

   (B) 20   (D) 32

4. How many more apples did Natasha and Susan pick together than Jiang?

   (F) 32

   (G) 24

   (H) 16

   (I) 6

Look Back (MA.3.A.1.1, MA.4.A.1.1)

SPIRAL REVIEW

5. Ivana has 5 times as many fish as Bridget. Bridget has 2 fish. How many fish do Ivana and Bridget have in all?

   (A) 7

   (B) 10

   (C) 12

   (D) 14

6. Jonas buys 4 bags of marbles. Each bag has six marbles in it. He gives a bag of marbles to his best friend. How many marbles does Jonas have now?

   (F) 3

   (G) 6

   (H) 12

   (I) 18

Name _____

Find Missing Factors

MA.4.A.1.1 Use and describe various models for multiplication in problem-solving situations, and demonstrate recall of basic multiplication and related division facts with ease.

Find the missing factor.

1. $4 \times \blacksquare = 32$

$\blacksquare = \underline{8}$

2. $\blacksquare \times 7 = 21$

$\blacksquare = \underline{\quad}$

3. $\blacksquare \times 9 = 54$

$\blacksquare = \underline{\quad}$

4. $5 \times \blacksquare = 35$

$\blacksquare = \underline{\quad}$

5. $8 \times \blacksquare = 72$

$\blacksquare = \underline{\quad}$

6. $\blacksquare \times 6 = 6$

$\blacksquare = \underline{\quad}$

7. $\blacksquare \times 5 = 20 + 5$

$\blacksquare = \underline{\quad}$

8. $7 \times \blacksquare = 30 - 2$

$\blacksquare = \underline{\quad}$

9. $3 \times \blacksquare = 23 + 4$

$\blacksquare = \underline{\quad}$

10. $\blacksquare \times 9 = 15 + 3$

$\blacksquare = \underline{\quad}$

11. $\blacksquare \times 8 = 8 - 8$

$\blacksquare = \underline{\quad}$

12. $6 \times \blacksquare = 46 - 4$

$\blacksquare = \underline{\quad}$

Problem Solving REAL WORLD

Use the table for 13–14.

Sports Balls	
Item	**Price**
Baseball	$3
Basketball	$10
Football	$9
Golf Ball	$2
Tennis Ball	$1

13. Lacey buys 4 of the same sports ball and spends $36. Which ball did Lacey buy?

_____

14. Jack has $20 to spend on some tennis balls and golf balls. He buys 6 tennis balls. How many golf balls can Jack purchase with the money that is left?

_____

Lesson Check (MA.4.A.1.1)

1. Kurt sets 32 chairs around 4 tables. If Kurt sets the same number of chairs around each table, which number sentence can be used to find the number of chairs at each table?

   (A) ☐ × 4 = 32

   (B) ☐ × 8 = 32

   (C) ☐ × 9 = 32

   (D) ☐ × 32 = 4

2. In the number sentence below, which number does the ☀ represent?

   $8 \times ☀ = 64$

   (F) 6

   (G) 7

   (H) 8

   (I) 9

Review Grade 4 (MA.4.A.6.1)

3. What is the word form of the number 8,045,306?

   (A) eight million, forty-five thousand, thirty-six

   (B) eight million, forty-five thousand, three hundred six

   (C) eight million, four hundred five thousand, thirty-six

   (D) eight million, four hundred five thousand, three hundred six

4. A machine is placing sheets of paper numbered 1 to 1,000,000 into 100 boxes. Into which box would the machine place the 608,113th sheet of paper?

   (F) 68

   (G) 61

   (H) 60

   (I) 7

Look Back (MA.3.A.1.3, MA.4.A.1.1)

5. Which of the following shows a division sentence related to the number sentence $3 \times 6 = 18$?

   (A) $6 \div 2 = 3$

   (B) $18 \div 9 = 2$

   (C) $18 \div 6 = 3$

   (D) $18 \div 2 = 9$

6. Carrie wants to stack 24 quarters into piles with 4 quarters in each pile. Which number sentence could Carrie use to find the number of piles she will make?

   (F) $12 \times 2 = 24$

   (G) $8 \times 3 = 24$

   (H) $4 \times 4 = 16$

   (I) $4 \times 6 = 24$

Chapter 2 Extra Practice

Lesson 2.1 (pp. 37–40)

Draw a quick picture that shows the sentence.
Write the related multiplication or division sentence.

1. $3 + 3 + 3 + 3 = 12$

2. 3 groups of 9 equals 27

_____

_____

3. $18 - 9 - 9 = 0$

4. 15 divided by 3 equals 5

_____

_____

5. Josh has 3 equal groups of markers. There are 5 markers in each group. How many markers does he have?

6. Kim belongs to a dance company. In one dance, there are 6 lines with 4 dancers in each line. How many dancers are there?

_____

_____

Lesson 2.2 (pp. 41–44)

Draw a quick picture to find the product or quotient.

1. $7 \times 3 =$ _____

2. $30 \div 5 =$ _____

3. $18 \div 2 =$ _____

4. $1 \times 6 =$ _____

5. Martha divides 27 stickers evenly among 3 friends. How many stickers does each friend receive?

6. Markers cost $5 a box. There are 4 markers in each box. How many markers can you buy for $20?

_____

_____

Lesson 2.3 (pp. 45–48)

Draw a quick picture to find the product or quotient.

1. $8 \times 4 = $ _____

2. $28 \div 4 = $ _____

3. _____ $= 10 \div 2$

4. $\begin{array}{r} 7 \\ \times\ 3 \\ \hline \end{array}$

5. $9 \times 2 = $ _____

6. $6 \times 4 = $ _____

Lesson 2.4 (pp. 49–52)

Write the related multiplication and division sentences to complete the fact family.

1. $1 \times 5 = 5$

_____

_____

2. $18 \div 3 = 6$

_____

_____

3. $24 \div 6 = 4$

_____

_____

4. $5 \times 4 = 20$

_____

_____

Find the product or quotient.

5. $6 \times 1 = $ _____

6. $40 \div 5 = $ _____

7. _____ $= 3 \times 9$

8. $35 \div 5 = $ _____

9. $5 \times 6 = $ _____

10. _____ $= 4 \times 9$

11. $27 \div 3 = $ _____

12. _____ $= 6 \times 6$

13. Amanda practices the piano 3 hours each day for 3 days. How many total hours does she practice?

_____

14. Roger has 18 action figures. He gives an equal number of them to his 2 brothers. How many action figures does each brother receive?

_____

Lesson 2.5 (pp. 53–56)

Find the product or quotient. Write the strategy you used.
Write *model, break apart, multiplication table, inverse operations, patterns,* or *doubles.*

1. $3 \times 8 =$ _____

2. _____ $= 56 \div 7$

3. $4 \times 9 =$ _____

4. $\begin{array}{r} 8 \\ \times\ 6 \\ \hline \end{array}$

_____   _____   _____   _____

5. $36 \div 6 =$ _____

6. _____ $= 8 \times 8$

7. $\begin{array}{r} 9 \\ \times\ 5 \\ \hline \end{array}$

8. $9\overline{)18}$

_____   _____   _____   _____

Lesson 2.6 (pp. 57–60)

Find the product or quotient.

1. $1 \times 8 =$ _____

2. $5\overline{)30}$

3. $49 \div 7 =$ _____

4. $\begin{array}{r} 6 \\ \times\ 7 \\ \hline \end{array}$

5. $4\overline{)16}$

6. $72 \div 8 =$ _____

7. $\begin{array}{r} 8 \\ \times\ 6 \\ \hline \end{array}$

8. $63 \div 9 =$ _____

9. Sara has a new box of pencils. She places 4 colors in each of 3 equal groups. How many pencils does she have?

10. Jack collects model cars. He has 72 in all. He divides the cars into 8 equal groups. How many cars are in each group?

_____   _____

Lesson 2.7 (pp. 63–66)

Find the square number.

1. $4 \times 4 =$ _____

2. $9 \times 9 =$ _____

3. $1 \times 1 =$ _____

4. $7 \times 7 =$ _____

Use a multiplication table.

5. What pattern do you see in the multiples of 6?

_____

_____

6. What pattern do you see in the multiples of 9?

_____

_____

Lesson 2.8 (pp. 67–70)

1. Mr. and Mrs. Watson took their 2 children to the aquarium. A child ticket costs $12. An adult ticket costs 2 times as much. How much did the Watson family spend on tickets?

_____

2. Mike has 6 times as many tomatoes as Cindy. Together they have 42 tomatoes. How many tomatoes does Mike have?

_____

Lesson 2.9 (pp. 71–74)

Find the missing factor.

1. $9 \times \boxed{} = 54$

$\boxed{} =$ _____

2. $1 \times \boxed{} = 7$

$\boxed{} =$ _____

3. $5 \times \boxed{} = 40$

$\boxed{} =$ _____

4. $\boxed{} \times 8 = 64$

$\boxed{} =$ _____

5. $\boxed{} \times 5 = 45 - 5$

$\boxed{} =$ _____

6. $4 \times \boxed{} = 31 + 5$

$\boxed{} =$ _____

7. $\boxed{} \times 6 = 7 + 11$

$\boxed{} =$ _____

8. $\boxed{} \times 4 = 91 - 59$

$\boxed{} =$ _____

9. $\boxed{} \times 7 = 70 - 28$

$\boxed{} =$ _____