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**New York State Assessment
Mathematics
Grade 4**

This sample includes the following:

Student Book pages (7 pages)

- Cover and Table of Contents
- Guided Practice pages
- Independent Practice pages

To Create a World ⁱⁿ which
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Grade

4

New York State Assessment

Student Book



Preparing for Next Generation Success in

Mathematics

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What You Need to Know

There are different ways you can compare numbers. You can use words, pictures, diagrams, or multiplication. It is important to remember that multiplication means you find the products of groups of numbers.

Multiplication Equations

Lesson Focus

I can explain and write multiplication equations as comparisons.

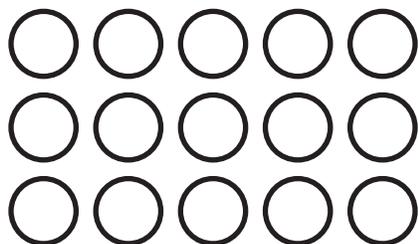
1. What are we focusing on in today's lesson?

2. What does the word *comparison* mean?

Let's Practice!

Comparing Numbers Using a Picture

What number is 3 times as much as 5? Draw a picture to show your thinking.



What are you being asked to do? Draw a circle around the most important words.

You could show 3×5 as the total number of circles in 3 groups of 5 circles each.

From the picture you can see that $3 \times 5 = 15$.

Comparing Numbers Using a Diagram

Ling sold 6 pineapples. He sold 3 times as many strawberries as pineapples. How many strawberries did he sell?

pineapples	6		
strawberries	6	6	6

What are you being asked to do? Draw a circle around the most important words.

You could draw a tape diagram comparing the 2 amounts.

From the diagram, you can see that 6 pineapples and 3 groups of 6 strawberries were sold. This is **18 strawberries** because $6 \times 3 = 18$.

Independent Practice

Directions: Read each question carefully and think about the answer before making your choice.

1 What number is 8 times as much as 4?

- A** 23
- B** 84
- C** 32
- D** 34

2 Use a tape diagram to show what number is 3 times as many as 7.

- A**

7	7	7	7	7	7	7
7	7	7				
- B**

3	3	3
3		
- C**

7	7	7
7		
- D**

3	3	3	3	3
3	3			

3 How much is 5 times as much as 7?

- A** 12
- B** 15
- C** 57
- D** 35

4 Which question can be answered using the multiplication problem 10×3 ?

- A** What is the sum of 10 and 3?
- B** What is the difference between 10 and 3?
- C** How many times does 3 go into 10?
- D** How much is 10 times as much as 3?

5 Which question can be answered using the multiplication problem 4×5 ?

- A** How much is 5 times as much as 4?
- B** What is the quotient of 4 and 5?
- C** What is difference between 5 and 4?
- D** What is the sum of 4 and 5?

6 Which tape diagram shows what number is 4 times as many as 8?

- A**

4	4	4	4
4			
- B**

8	8	8	8
8			
- C**

4	4
4	
- D**

8	8	8	8	8	8	8	8
8	8						

7 What number is 6 times as much as 9?

- A** 54
- B** 15
- C** 45
- D** 69

8 What number is 9 times as much as 20?

- A** 18
- B** 180
- C** 29
- D** 110

What You Need to Know

Division is splitting up an amount into equal parts. Multiplication is finding the product of groups of numbers, or factors. Sometimes, you need to do many steps to find the answer to a problem.

Solving Real-World Problems**Lesson Focus**

I can use multiplication or division to solve real-world problems.

1. Which details help you understand this objective?

2. What are *real-world problems* in math?

Let's Practice!**Solving a Real-World Problem**

The school auditorium seats 500 students. There are 50 rows in the auditorium.

The school gym has 3 times as many rows as the auditorium with the same number of seats per row. What is the total number of students who can sit in the school gymnasium?

$$500 \text{ seats} \div 50 \text{ rows} = 10 \text{ seats per row}$$

There are 10 seats in one row in the school auditorium.

Since there are 150 rows and each row has 10 seats, you can multiply $150 \text{ rows} \times 10 \text{ seats per row} = 1,500 \text{ seats}$. The gymnasium seats a total of 1,500 students.

$$3 \times 50 \text{ rows} = 150 \text{ rows}$$

There are 150 rows in the gymnasium.

What are you being asked to do? Underline the most important words.

Which strategies will you use? Begin by finding the number of seats in one row in the auditorium.

Independent Practice

Directions: Read each question carefully and think about the answer before making your choice.

- 1** Angelo's grandmother has 84 flowers. She wants to put them into vases of 12 flowers each. How many vases will she need?
- A** 96
B 12
C 7
D 9
- 2** Rico's mom has 2 times as many flowers as Angelo's grandmother from problem number 1. How many flowers does Rico's mom have?
- A** 192
B 180
C 168
D 150
- 3** Johanna can fit 2 people in her car. Myka's car fits 3 times as many people as Johanna's car. Shin's car fits 3 fewer people than Myka's car. What is the total number of people all 3 cars can fit?
- A** 8
B 9
C 10
D 11
- 4** Mickey has 30 baseball cards. Rhonda has 4 times as many cards as Mickey. Fiona has 10 fewer cards than Mickey. How many baseball cards do they have in all?
- A** 170
B 120
C 140
D 20
- 5** Wendy needs 25 cookies so each student in her class receives 1 cookie. Darnell's class needs 5 fewer cookies. Giada's class needs 2 times as many cookies as Darnell's class. How many cookies do they need in all?
- A** 95
B 75
C 105
D 85
- 6** There are 24 students in Mrs. Reid's class. She has 2 times as many pencils as there are students in her class. How many pencils does Mrs. Reid have?
- A** 24
B 28
C 50
D 48