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New York State Assessment
Mathematics
Grade 5

This sample includes the following:

Student Book pages (7 pages)

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

Grade 5

New York State Assessment

Student Book

Preparing for Next Generation Success in

Mathematics

TCM Teacher Created Materials

Table of Contents

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Order of Operations

Lesson Focus

I can use the order of operations to solve problems.

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

_____

_____

2. What is the *order of operations*?

_____

_____

What You Need to Know

The order of operations is a specific sequence of steps that we follow to solve mathematical expressions. We complete the order of operations in this order:

1. *Grouping Symbols—these can be ( ), { }, [ ], or | |*
2. *Exponents—powers of a number*
3. *Multiply or Divide—from left to right*
4. *Add or Subtract—from left to right*

Let's Practice!

Finding the Value of Expressions

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

Example 1: What is the value of the expression below?

$$[(12 - 7) \div 5] + 9 \times 3$$

First, we look for grouping symbols. We start inside the ( ) and work our way out.

$$12 - 7 = 5$$
$$[5 \div 5] + 9 \times 3$$

Next, we solve $5 \div 5 = 1$.

$$1 + 9 \times 3$$

The next step is to solve $9 \times 3 = 27$.

$$1 + 27 = 28$$

The value of the expression is 28.

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

Example 2: What is the value of the expression below?

$$20 - 17 + 9 \div 3 - (6 \div 3)$$

First, we should divide $(6 \div 3) = 2$.

$$20 - 17 + 9 \div 3 - 2$$

The next step is to divide $9 \div 3 = 3$.

$$20 - 17 + 3 - 2$$

Now, because we have addition and subtraction left, we work left to right.

$$(20 - 17 = 3) + (3 - 2 = 1)$$

We are left with the expression $3 + 1$, so the value of the expression is 4.

Independent Practice

Directions: Choose the correct answer for each problem.

1 What is the value of the expression below?

$$\{[20 \div 4] - (2 - 1)\}$$

A 1
B 2
C 4
D 8

2 What is the value of the expression below?

$$[(18 \div 6) - 2] + 9 \times 2$$

A 14
B 28
C 16
D 19

3 What is the value of the expression below?

$$[(16 - 5) \times 2] - 6$$

A 16
B 20
C 22
D 24

4 What is the value of the expression below?

$$8 + [(9 \div 3) \times 4]$$

A 56
B 20
C 14
D 32

5 What is the value of the expression below?

$$9 + 6 - (7 \times 2) + 6$$

A 7
B 18
C 22
D 46

6 What is the value of the expression below?

$$\{[27 \div 3] - (8 \div 4)\} + 7$$

A 18
B 22
C 14
D 9

Expressions

Lesson Focus

I can write numerical expressions that represent word problems.

1. Which details help you understand this objective?

_____

_____

2. What is a *numerical expression*?

_____

_____

What You Need to Know

It is helpful to know that the sum is the answer to an addition problem. A difference is the answer to a subtraction problem. A product is the answer to a multiplication problem, and a quotient is the answer to a division problem. We can write mathematical expressions to represent word problems, and these terms sometimes clue us in as to which operation to use.

Let's Practice!

Finding the Value of Expressions

Example 1: Marco has football practice for 2 hours in the morning and 3 hours in the afternoon 5 days each week. Write an expression that can be used to show how many hours Marco has football practice each week.

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

For one day, Marco practices 2 hours in the morning and 3 hours in the afternoon, so we can add those together. Because we want to add the numbers first, we can put it in parentheses: (2 + 3). Next, Marco practices 5 days every week, so after we find the sum, we can multiply the sum by 5. The expression is $(2 + 3) \times 5$.

Example 2: Maria makes bowls on her pottery wheel. She makes 3 bowls on Monday, 2 bowls on Tuesday, and 4 bowls on Wednesday every week for 6 weeks. Write an expression that can be used to show how many bowls Maria makes after 6 weeks.

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

First, we need to find the sum of the bowls Maria makes each week. To find the sum, we add 3 + 2 + 4. Because we want to add the numbers first, we can put in parentheses: (3 + 2 + 4).
Next, Maria makes the bowls for 6 weeks, so we multiply the sum by 6. The expression is $(3 + 2 + 4) \times 6$.

Independent Practice

Directions: Choose the correct answer for each problem.

1 Monica babysits for her neighbor's 3 children 4 days each week. She feeds the children twice a day. Which expression can be used to show how many total meals Monica feeds the children in 1 week?

A $3 + 2 + 4$

B $3 \times 2 \times 3$

C $(3 \times 4) + 2$

D $(3 \times 2) \times 4$

2 Jenice has a dog-walking business. She walks 3 poodles twice a day and 2 golden retrievers three times a day. Which expression can be used to show how many total walks Jenice takes with the dogs every day?

A $(3 \times 2) + (2 \times 3)$

B $(3 \times 3) + (2 \times 2)$

C $3 \times 3 \times 2 \times 2$

D $(3 + 2) + (2 + 3)$

3 Joseph has a paper route and delivers 4 papers each week to 25 customers 4 times per month. Which expression can be used to find the total papers Joseph delivers each month?

A $4 + 25 + 4$

B $8 + 25 \times 4$

C $4 \times 25 \times 4$

D 25×8

4 LaToya bakes cupcakes and cookies for nursing homes. She bakes 48 cupcakes and 24 cookies each week for 2 different nursing homes. Which expression can be used to show the total number of items LaToya bakes each week?

A $48 + 24 + 2$

B $(24 \times 2) + 48$

C $(48 + 24) \times 2$

D $2 + (24 + 48)$

5 Linus plays 2 baseball games every week for 9 weeks. Then, he plays in 4 playoff games. Which expression can be used to show the total number of games Linus plays?

A $2 + 9 + 4$

B $(2 \times 9) + 4$

C $2 \times 9 \times 4$

D $(4 \times 9) + 2$

6 Wong collects baseball cards. He collected 24 on Monday, 16 on Tuesday, and 32 on Wednesday. He gave away 12 cards on Thursday. Which expression can be used to show the total number of baseball cards Wong has left?

A $(24 + 16 + 32) - 12$

B $12 - 24 + (16 + 32)$

C $(24 - 16 + 32) + 12$

D $24 - 12 + (32 - 16)$