Scanning Pens - U.S. Education

Activities to Support Students Using the ReaderPen™

Math for Students in Grade 6 to 9

Many learners who are proficient at math and problem solving have difficulty reading the directions or terms in math problems.

MATH WORD PROBLEMS

GRADE 6 - Ratios & Equivalent Ratios

CCSS.MATH.CONTENT.6.RP.A.1
Understand ratio concepts and use ratio reasoning to solve problems

Use the ReaderPen™ to read the summary below.
You can choose to read the whole summary or only the difficult words.

Lesson Summary

A ratio is an ordered pair of numbers, which are not both zero. A ratio is denoted *AA: BB* to indicate the order of the numbers—the number *AA* is first, and the number *BB* is second. The order of the numbers is important to the meaning of the ratio. Switching the numbers changes the relationship. The description of the ratio relationship tells us the correct order for the numbers in the ratio.

Use the ReaderPen™ to scan this word problem. Scan as many times as needed. Use the DICTIONARY feature to hear a definition of unfamiliar words.

Problem Set

In the cafeteria, 100 milk cartons were put out for breakfast. At the end of breakfast, 27 remained.

a. What is the ratio of the number of milk cartons taken to the total number of milk cartons?

b. What is the ratio of the number of milk cartons remaining to the number of milk cartons taken?

Solve using a model or equation. Show your work.

Understanding Math Vocabulary

The importance of teaching and learning the language of mathematics is vital for the development of mathematical proficiency. Students' mathematical vocabulary learning is a very important part of their language development and ultimately mathematical proficiency.

Riccomini, Paul & Smith, Gregory & Hughes, Elizabeth & Fries, Karen. (2015). The Language of Mathematics: The Importance of Teaching and Learning Mathematical Vocabulary. Reading & Writing Quarterly.

Scanning Pens - U.S. Education

Activities to Support Students Using the ReaderPen™

Math for Students in Grade 6 to 9

Many learners who are proficient at math and problem solving have difficulty reading the directions or terms in math problems.

MATH VOCABULARY

Scan then listen to these terms and definitions.

Repeating them aloud can help secure them in memory.

Numerical expression (description): A numerical expression is a number, or it is any combination of sums, differences, products, or divisions of numbers that evaluates to a number.

Expression (description): - An expression is a numerical expression, or it is the result of replacing some (or all) of the numbers in a numerical expression with variables.

Equivalent expressions: - Two expressions are equivalent if both expressions evaluate to the same number for every substitution of numbers into all the letters in both expressions.

MATH WORD PROBLEMS

GRADE 7 - Generating Equivalent Expressions

CCSS.MATH.CONTENT.7.RP.A.2
Recognize and represent proportional relationships between quantities

Use the ReaderPen™ to scan this word problem. Scan as many times as needed. Use the DICTIONARY feature to hear a definition of unfamiliar words.

Problem Set

Write equivalent expressions by combining like terms.

Verify the equivalence of your expression and the given expression by evaluating each for the given values: $a = 2$, $b = 5$, and $c = -3$.

1. $3a + 5a$

2. $8b - 4b$

3. $5c + 4c + c$

Solve using a model or equation. Show your work.

Scanning Pens - U.S. Education

Activities to Support Students Using the ReaderPen™

Math for Students in Grade 6 to 9

Many learners who are proficient at math and problem solving have difficulty reading the directions or terms in math problems.

MATH VOCABULARY

Scan these math terms. Repeat each word aloud.
Use the Dictionary feature to hear the meaning of each word.

Math words can have multiple meanings. Listen for the math-related definition.

coefficient	**acute**	**proportionality**	**quadrilateral**
expression	**transversal**	**congruent**	**equivalent**

MATH WORD PROBLEMS

GRADE 9 - Probability

CCSS.MATH.CONTENT.HSS.IC.A.1
Understand and evaluate random processes underlying statistical experiments.

Use the ReaderPen™ to scan this word problem. Scan as many times as needed. Use the DICTIONARY feature to hear a definition of unfamiliar words.

Lesson Summary

Understand statistics as a process for making inferences about population parameters based on a random sample from that population. Decide if a specified model is consistent with results from a given data-generating process, for example, by using simulation.

Problem Set

Bag A contains 9 red marbles and 3 green marbles. Bag B contains 9 black marbles and 6 orange marbles.

What is the probability of selecting a green marble at random from Bag A?

What is the probability of selecting a black marble at random from Bag B?

Solve using a model or equation. Show your work. Explain how you found your answer.