

Just In Time Quick Check
Standard of Learning 3.4b

Strand: Computation and Estimation

Standard of Learning (SOL) 3.4b

The student will create and solve single-step practical problems that involve multiplication and division through 10×10 .

Grade Level Skills:

- Create practical problems to represent a multiplication or division fact.
- Use multiplication and division basic facts to represent a given situation, using a number sentence.
- Recognize and use the inverse relationship between multiplication and division to solve practical problems.
- Solve single-step practical problems that involve multiplication and division of whole numbers through 10×10 .
- Apply strategies, including place value and the properties of multiplication and/or addition when multiplying and dividing whole numbers.

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Just in Time Quick Check Teacher Notes

Supporting Resources:

- VDOE Co-teaching Mathematics Instructional Plans
 - [3.4 - Multiplication and Division](#) (Word) / [PDF Version](#)
- VDOE Word Wall Cards: Grade 3 ([Word](#)) | ([PDF](#))
 - Multiply: Product
 - Multiplication: Set Model
 - Multiplication: Array Model
 - Multiplication: Area (array) Model
 - Multiplication: Number Line Model
 - Divide: Quotient
 - Division: Number Line and Array Models
 - Related Facts: Addition/Subtraction
 - Related Facts: Multiplication/Division

Supporting and Prerequisite SOL: [3.4a](#), [2.2a](#), [2.6c](#), [1.1d](#), [1.6](#)

SOL 3.4b - Just in Time Quick Check

1. Jason has 9 packages of muffins. Each package has 3 muffins. How many muffins are in these packages?

Write an equation to represent this problem.

Solve this problem.

2. There are 12 candies on the counter. Kendra will share the candies equally among 4 bags. How many candies will go in each bag?

Write a number sentence that can be used to solve this problem.

Solve this problem. Explain how you found your answer.

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Common Errors/Misconceptions and their Possible Indications

1. Jason has 9 packages of muffins. Each package has 3 muffins. What is the total number of muffins in these packages?

Write an equation to represent this problem.

Solve this problem.

Some students may see “total” and choose to add instead of multiplying $9 \times 3 = 27$ or $3 \times 9 = 27$. Other students may use their knowledge of the relationship between 9 and 3 and divide instead of using the context of the problem to determine the operation used to solve. These students would benefit from creating a model to represent the situation and to solve the problem. Providing opportunities for students to share different models that represent a problem situation, and the associated number sentences used to represent thinking, may help students develop problem-solving strategies as they make meaning for both multiplication and division. Students will also benefit from additional experiences with the variety of problem types for multiplication and division described in the Grade 3 Curriculum Framework.

2. There are 12 candies on the counter. Kendra will share the candies equally among 4 bags. How many candies will go in each bag?

Write a number sentence that can be used to solve this problem.

Solve this problem. Explain how you found your answer.

Students who subtract and find $12 - 4 = 8$ instead of $12 \div 4 = 3$ or $12 \div 3 = 4$ would benefit from using concrete materials to first act out the problem and then to represent this action with a model or picture. Note that while most students will likely use $12 \div 4 = 3$ to represent this situation, others may use different equations, which would also be considered correct:

- $12 \div 3 = 4$ 12 candies, with 3 candies per bag, takes 4 bags
- $4 \times 3 = 12$ 4 bags with 3 candies per bag is 12 candies
- $3 \times 4 = 12$ 3 candies in each of 4 bags is 12 candies

As students explain how they found their answer, they will reveal the strategies used. Students who use repeated subtraction may accurately understand what the question is asking, but may not be comfortable with division facts. Opportunities for students to discuss different representations are encouraged, as these experiences will help students develop flexible strategies for problem solving and conceptual understanding for the inverse relationship between multiplication and division. Students will also benefit from more opportunities to interpret the variety of problem types described in the Grade 3 Curriculum Framework, to represent their solutions with models and equations, to explain their thinking to others, and to consider other students’ strategies and representations.