

Multistep Problems

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Expressions, Equations and Inequalities

7th grade

Missouri Learning
Standards (MLS)

7.EE1.B.3a

Expressions, Equations and Inequalities

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Common Core State
Standards

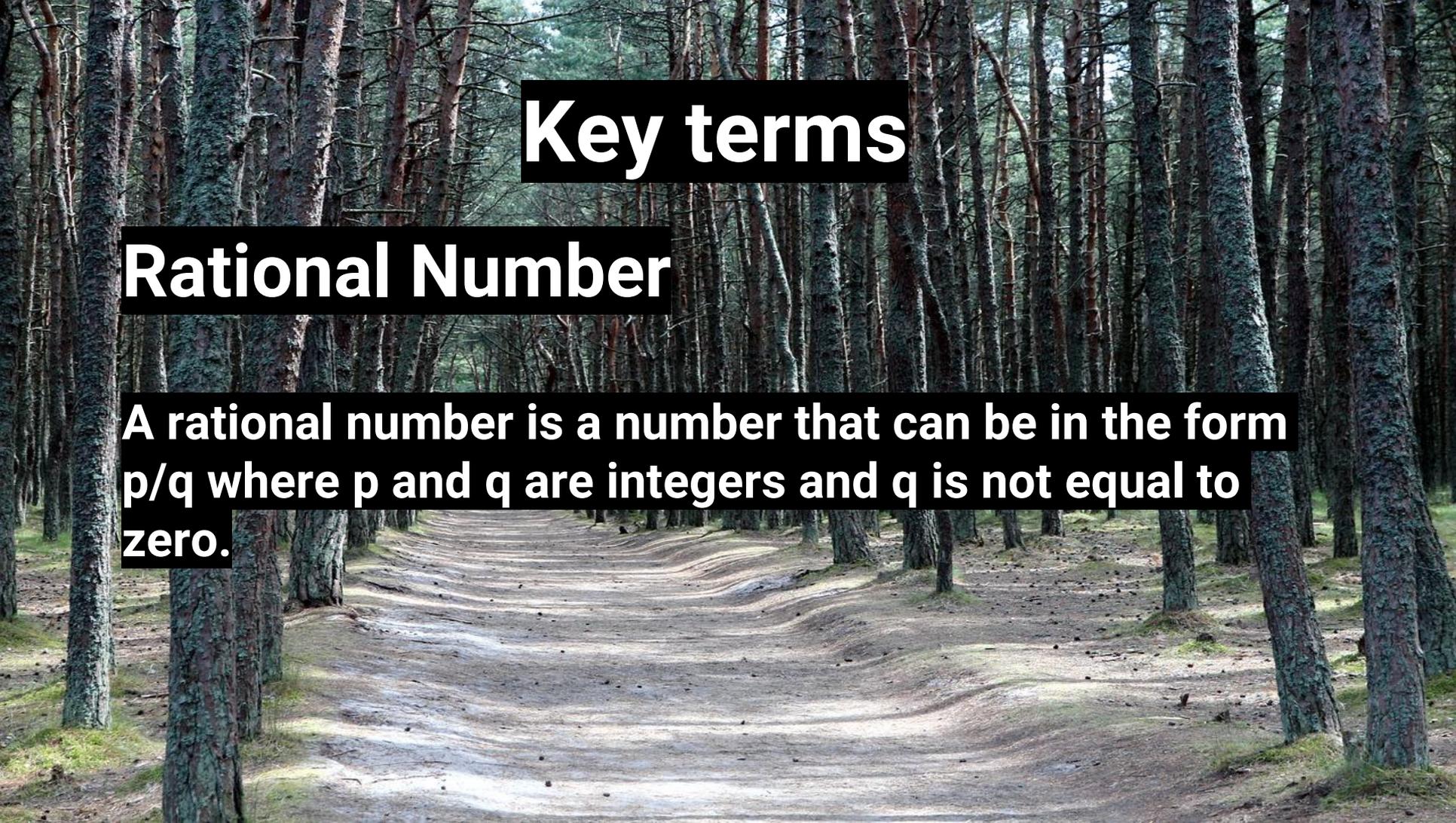
[CCSS.MATH.CONTENT.7.RP.A.3](#)



Objective

Solve problems using numerical and algebraic expressions and equations.

Solve multi-step problems posed with rational numbers.

A dirt path winds through a dense forest of tall, thin trees. The path is light brown and shows signs of being trodden, with some darker spots. The trees are mostly evergreens with thin trunks, and the ground is covered in a layer of dry leaves and pine needles. The lighting is soft, suggesting a slightly overcast day or a shaded forest interior.

Key terms

Rational Number

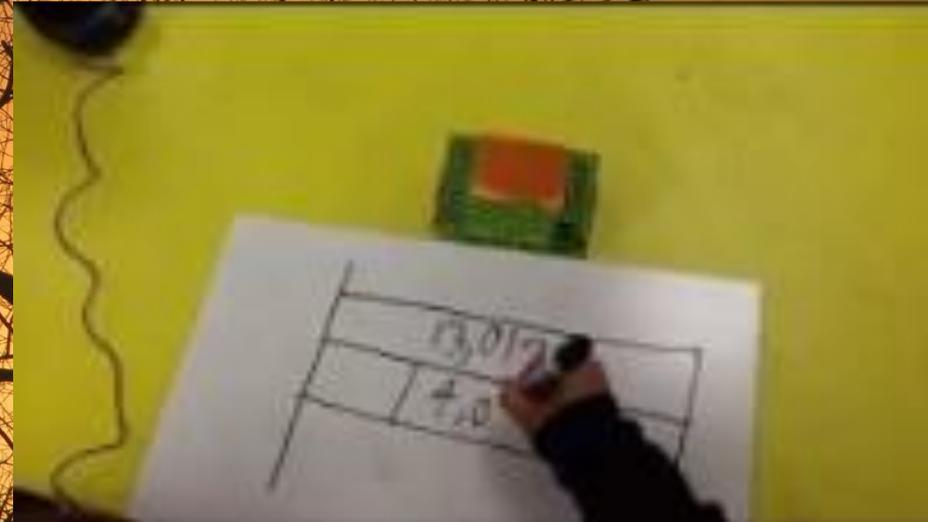
A rational number is a number that can be in the form p/q where p and q are integers and q is not equal to zero.

Prior Knowledge Needed

- **Students will need to know how to read and write**
- **Students need to identify the numerator and denominator.**
- **Students will need to know how to add and subtract**
- **Students will need to know how to set up a problem using a strip diagram**

Let's look at an example of how to solve a multi-step problem using a STRIP DIAGRAM.

<https://www.youtube.com/watch?v=6I7YbBXMWto&t=115s>



Let's try this as a class.

Micha was sent to the market to get hats and gloves for her and each one of her 6 family members. Micha has \$55 dollars to spend on hats and gloves. While at the market, Micha found a pair of new winter boots she has been wanting. Will Micha have enough money to purchase hats and gloves for her and all her family members plus the new boots?

1 Hat costs \$4

1 pair of Gloves costs \$2

1 pair of Boots costs \$13

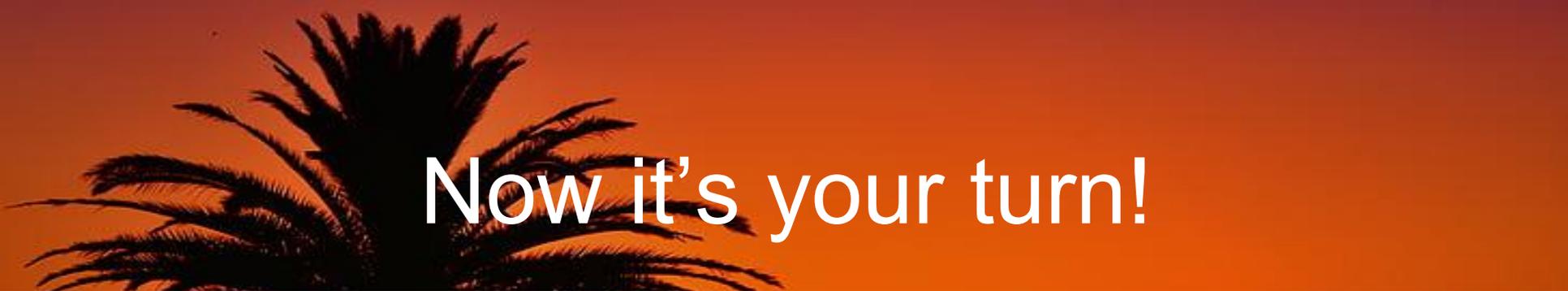
STRIP DIAGRAM

Part	Part	Part
Total		

Answer

Hats = \$4 7 Family members including Micha $7 \times \$4 = \28	Gloves = \$2 7 Family members including Micha $7 \times \$2 = \14	Boots = \$13 $1 \times \$13$
Total = \$55		

$\$28 + \$14 + \$13 = \55 Micha has enough money to buy every including herself a hat, pair of gloves and herself the winter boots she wanted.



Now it's your turn!

Sarah started her new job washing cars. She works 5 days a week and makes \$125 a day. After receiving her first week's paycheck, she wanted to buy herself something nice. Sarah remembered, she had to save \$400 every paycheck for her rent and car payment.

Sarah found a purse and matching umbrella that was on sale for \$225. Does Sarah have enough money to buy the purse and umbrella? If not, how much more money does she need?