

Texting Trouble (5.OA.3)

Summary

Students will apply their understanding of patterns and rules, ordered pairs, and coordinate graphing to solve real world problems related to the cost of text messaging.

Main Core Tie

Mathematics Grade 5

[Strand: OPERATIONS AND ALGEBRAIC THINKING \(5.OA\) Standard 5.OA.3](#)

Time Frame

1 class periods of 60 minutes each

Group Size

Pairs

Life Skills

Thinking & Reasoning, Communication, Systems Thinking

Materials

Graph paper
Task sheet
Manipulatives
Pencils

Background for Teachers

Teachers need an understanding of the relationship between mathematical patterns created from ordered pairs and how that relationship appears on a coordinate plane.

Student Prior Knowledge

Students will need an understanding of how to organize information in a way that shows the relationship between the terms. They will also need to understanding how to graph terms on a coordinate plane.

Intended Learning Outcomes

Students will be able to apply their understanding of mathematical patterns, ordered pairs, and coordinate graphing to solve real world problems related to cell phone usage.

CCSS.MATH.CONTENT.5.OA.B.3 Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. For example, given the rule "Add 3" and the starting number 0, and given the rule "Add 6" and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.

Strategies for Diverse Learners

Supports for struggling students include:

Organizational supports such as a table or chart to record the information

Modeling for breaking the problem into smaller problems

Extensions

Additional activities include:

Extension activities found in the lesson plan

Comparing actual rate plans

Apply international rates to each scenario

Bibliography

Adapted from: Smith, Margaret Schwan, Victoria Bill, and Elizabeth K. Hughes. "Thinking Through a Lesson Protocol: Successfully Implementing High-Level Tasks." *Mathematics Teaching in the Middle School* 14 (October 2008): 132-138.

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