Arcade Tickets

Summary

This is a math task. It relates to Standard 1.OA.2 in the 2010 Utah Core Standards.

Main Core Tie

Mathematics Grade 1

Strand: OPERATIONS AND ALGEBRAIC THINKING (1.OA) Standard 1.OA.2

Materials

Task Sheet TTLP Sheet for Lesson Plan

Background for Teachers

See TTLP and Curriculum Guide 1.OA.2

Student Prior Knowledge

See Critical Background Knowledge in the Curriculum Guide for 1.OA.2 Students should be trained in collaborative structures such as Pair Share and Class Discussions.

Intended Learning Outcomes

Mathematical Practices 1, 2, 3, 4 are likely to be used in this task.

Instructional Procedures

LAUNCH: Who has been to the Nickelcade or played a video game? What are some games that you've played? What do the machines give you when you do well? What do you do with those tickets? Tell the story of going to the Nickelcade last night. Here are the games I played…
I saw a really cool bouncy ball (show a picture of what you want to buy) at the prize counter. It costs 12 tickets. Can you help me figure out if I have enough tickets?
EXPLORE: Students will work independently at first, pair share, then discuss as a class.
Students will record their work on the story problem paper which is in the TTLP sheet and report to a partner. The teacher will select student work to illustrate a variety of strategies used. As the students explain their ideas, other students must be prepared to make a comment "I understand..." I like... because..." or ask a question once they finish.
The ideas that students share may fall into one of these categories. You can have students do more word problems using their method and at least one other method they heard presented. The teacher can also present their favorite strategy.
DISCUSS:
Strategies
    Counting All starting at 1 (tickets, picture, number line, counters, cubes, Rek-en-Rek)
    Picture representations
    Counting On from the larger number (tickets, picture, number line, counters, cubes, R-n-R)
    Tally marks
    Known facts (combinations of ten: 6+4=10)
    Derived facts (doubles plus one)
    Compensation (decompose and re-compose)
    Finding different combinations to add first

Strategies for Diverse Learners

Support for Struggling Students:
    Smaller number choices
    Pre-made number sentence/equation with blanks or other pre-made organizer
    Actual tickets in three groups (Different colored tickets would be ideal for grouping.)
    Specific number of counters

Extensions

Extensions:
    Prize counter questions- What can I buy with my tickets? Do I have enough for _____?
    Have students create a mock prize counter.
    Give students their own tickets. Predetermine number choices based on informal assessment of
    original task. Have students add up their own tickets. Ask students to try other ways besides
    counting.
    Remember some of the strategies you used in the original task and see if it works for this task.

Bibliography

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