

DAY 7: Sorting & Solving Percent Problems

Materials

Copies: 7.1 Solving Percent Problems II
7.2 Slap the Best Deal Rules
7.3 Slap the Best Deal Cards (1-set cut per pair)
Ticket Out the Door Day 7

Supplies: Calculators (1 per student)
Slap the Best Deal Cards (1 set per pair copied and cut out from cardstock; Deal Cards on one color of cardstock; Original Item cards on another color of cardstock)
Highlighters (2 per student) OR colored pencils (2 per student)

Objective

Students will sort percent word problems into 1-step and multi-step and apply the box method with proportions to solve all types of word problems.

Student Talk Strategy

Report to a Partner for 7.1 sorting

Academic Language Use

Percent- “out of 100”. In this unit, percent will be understood as the number of boxes colored out of 100. Percent will be understood as an “elastic” number, meaning that the actual amount of a percent changes depending upon what the whole is.

Activity Notes

15 minutes: Sort word problems

Pass out activity sheet 7.1 and 2 colored pencils or highlighters to each student. Explain to the class that their task is to decide which percent word problems will require 1-step, meaning that when they solve for x , that is the answer, or multi-steps, meaning that after they solve for x they have to add or subtract.

Ask them to make a key at the top of the page, listing 1 color for 1-step and another color for multi-step. Go through the two examples as a class, by choosing students to read the word problems aloud. Give the students 30 seconds to think about which scenario will require 1 step and which requires more than 1 step. Have the class vote by holding up 1 finger for 1-step and 2 fingers for 2-steps. Use random selection to have a few students explain their reasoning. Then give the class 8 minutes to read through the problems and use their colored pencil or highlighter to mark each problem as 1-step or multi-step. Then give them 2 minutes to “report to a partner” to share what they decided. At the end of 10 minutes, bring the class back together and have them vote on each problem, as you did for the examples. If there are conflicting answers, call on students to explain.

25 minutes: Solving percent word problems

Let the students know they now need to solve each problem. Tell them that for each problem you want to see the picture (box) with the percents and numbers labeled, an estimate, a proportion and the answer. Set the timer for 20 minutes and pass out calculators for students to use. Have them work independently. Circulate to assess students and to question them to help guide their thinking. While they are working, choose various students who have solved problems correctly to put their work up on the whiteboard. Use the last 5 minutes to have a few students explain their work.

15 minutes: Slap the Best Deal

Pass out 1 set of Slap the Best Deal Cards to each pair. This is activity sheet 7.3 copied and cut out from cardstock. Have students shuffle the piles.

Pass out Activity Sheet 7.2 and go over the rules of the game. The object of the game is to be the partner who most often figures out which card is the best deal. Partner #1 will flip over two “deal” cards first. Partner #2 will then flip over an “original item” card and players will determine which is the best deal. When one of the two players figures out which deal card is the best deal for the item shown, he or she “slaps” the card corresponding to the best deal. The opposing player then verifies to see if the person is correct.

The winner gets one point for each correct answer. If a card is “slapped” and the opposing player(s) deems the card incorrect, then the “slapper” loses a point. The person with the most points after the last round wins! Note: Scratch paper may come in handy.

Model 1 example for the students by flipping over 1 original item and then 2 deal cards. Have the students think silently for 30 seconds and then have them vote which “deal” is better by voting thumbs up for the deal 1, thumbs down for the deal 2 and a sideways thumb if they think they are equal.

Let the pairs play. Make sure to let them know that they need to be using appropriate behavior or else they will be choosing to work on percent problems from the book on their own. Collect the cards at the end of the day, as you will use them again on Day 8.

5 minutes: Ticket out the Door

Pass out the Ticket out the Door and have the students raise their hands when finished (so that you can check it and then dismiss them).