

Balancing Act Math

Purpose

Students will relate problem situations to number sentences by gaining a clearer understanding of the meaning of number sentences.

Materials

For the teacher: balance scale, 25 cubes that are equal in weight, chalkboard, chalk

For each student: copy of Black Line Master (BLM) *Balancing Act Math*

Activity

A. Introduction

1. Place seven cubes onto one side of the balance scale.
2. Tell the students: "I have placed seven cubes on this side of the scale and there are none on the other side." Write the number "7" on the chalkboard.
3. Place two more cubes onto the same side of the scale and tell the students: "I have placed two more cubes on the side with seven cubes." Write the number "2" next to the "7," leaving space to add an addition sign later.
4. Ask the students how many cubes they think will need to be placed on the other side of the scale to balance it.
5. Check the answers given by placing cubes on the other side of the scale until the correct answer is known.
6. Write the number "9" on the board next to the "2" leaving space for the equal sign.
7. Discuss the relationship between the three numbers and the cubes. Finally, ask the students if it is correct to say: " $7 + 2 = 9$," writing in the addition and equal sign when you have asked them.
8. Explain that the numbers on one side of the equal sign must have the same value as the number on the other side.
9. Repeat the activity with different sets of numbers.

(continued)

EXTENDING
THE



ACTIVITY

Use the balance scale to teach subtraction and the inverse relationship between addition and subtraction. It may also be used to teach the commutative rule of addition.

connecting
across the
curriculum



**English/
Language Arts**

Have students write their own number sentences and a problem situation that relates to the number sentence.

Standards Links
2.2.1, 2.2.2, 2.6.2

Activity (continued)

B. Student Activity

1. Present the following problem situation to the class:
The teacher asked Laura and Maya to clean up the books they had been playing with. She wanted them each to put away the same number of books. Laura picked up five books in one arm and four in the other arm. Maya decided to carry her books in a bag. How many books would she need to carry in the bag to carry the same number of books as Laura?
2. Have students work on the problem individually and discuss answers as a class.
3. Have a student use the balance scale to show the solution to the problem.
4. Have another student write the number sentence that represents the problem situation on the chalkboard.

C. Homework

Have the students complete the BLM *Balancing Act Math* as homework and return it the following day.

Questions for Review

Basic Concepts and Processes

During the activity and when reviewing the BLM *Balancing Act Math*, discuss the following questions with your students to gauge their understanding of the Standard Indicator:



How did you choose the number of blocks to place on the scales?



Were you able to write the number sentence that matched the cubes you had placed on the scale?



How did you decide on the correct number sentence?



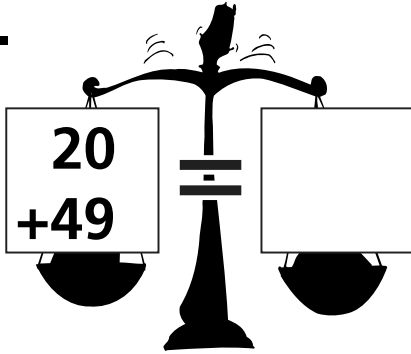
What does “same value” mean when you talk about the numbers on either side of the equal sign?

Name: _____

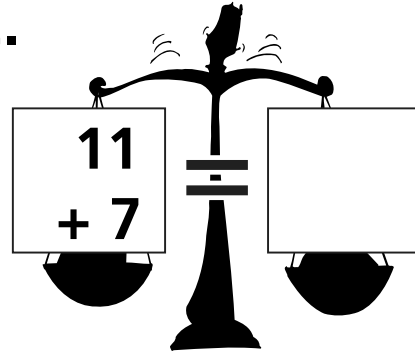
Balancing Act Math

Find the answers that balance the addition sentences below.

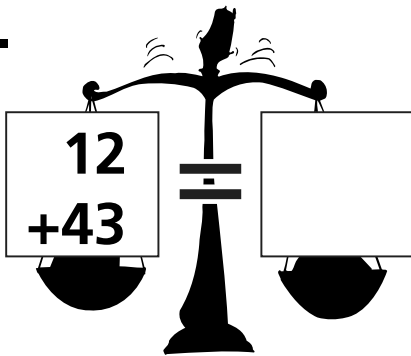
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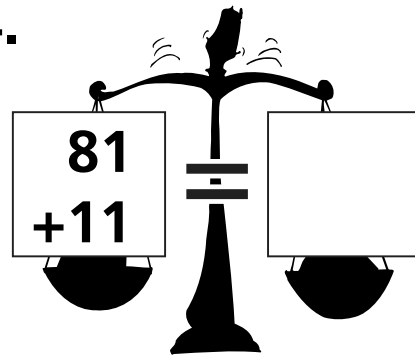
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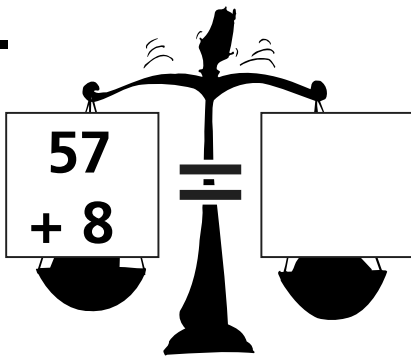
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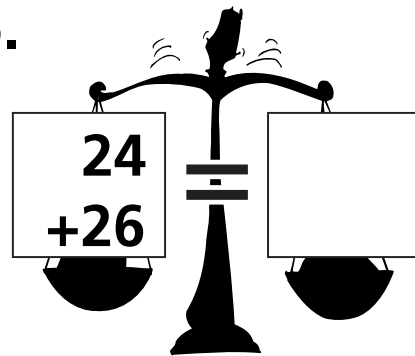
4.



5.



6.



Extra Credit

Balance these addition sentences for extra credit.

7. $35 + \underline{\quad} = 61$

8. $\underline{\quad} + \underline{\quad} = 42$

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Teacher Directions

Distribute the BLM *Balancing Act Math*, and have students solve the addition sentences by using the balance scale idea.

The two addition sentences at the bottom of the page may be included for extra credit. If you choose not to use the extra credit sentences, cover them with a white piece of paper before making copies.

Answer Key

1. $20 + 49 = 69$

2. $11 + 7 = 18$

3. $12 + 43 = 55$

4. $81 + 11 = 92$

5. $57 + 8 = 65$

6. $24 + 26 = 50$

Extra Credit

7. $35 + \underline{26} = 61$

8. Answers may vary.