

Operation with Signed Numbers - Multiplication and Division

Collecting Data

DIRECTIONS: Multiplication is often thought of as a shortcut for addition, or as thinking of groups of things. In this activity, you will use manipulatives to discover rules for multiplying and dividing positive and negative integers. Start each problem with a zero board.

For each problem in Experiments 1-4, record the results in the space provided. Your answer should include the number of tiles in the result, along with the color of the tiles. You may use a Y for yellow and a R for red.

Experiment 1

1. Show 3 groups of 2 shaded discs. _____
2. Show 2 groups of 4 shaded discs. _____
3. Show 4 groups of 3 shaded discs. _____
4. Show 2 groups of 5 shaded discs. _____

Experiment 2

5. Show 2 groups of 3 unshaded discs. _____
6. Show 4 groups of 2 unshaded discs. _____
7. Show 3 groups of 5 unshaded discs. _____
8. Show 3 groups of 4 unshaded discs. _____

Experiment 3

9. Remove 3 groups of 4 shaded discs. _____
10. Remove 2 groups of 3 shaded discs. _____
11. Remove 4 groups of 3 shaded discs. _____
12. Remove 2 groups of 5 shaded discs. _____

Experiment 4

13. Remove 2 groups of 3 unshaded discs. _____
14. Remove 4 groups of 2 unshaded discs. _____
15. Remove 5 groups of 3 unshaded discs. _____
16. Remove 3 groups of 4 unshaded discs. _____