

DRAW for Basic Math

To help me calculate answers to problems with whole numbers or fractions
(addition, subtraction, multiplication, division).

Discover the sign.

- Scan the problem and find the operation sign (+, -, ×, ÷)
- Circle, and say name of computation sign.
- Say what the sign means.

Read the problem.


- Read the whole problem.
- Say the problem aloud as you read.

Answer, or draw tallies and/or circles and check your answer. (*see draw examples for each operation*).

- Answer the problem if you know how to solve it.
- If you don't know how to solve the problem then draw pictures to solve it.
- For example:

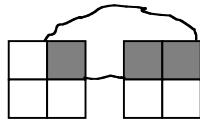
Addition

Whole Numbers

$$\begin{array}{r} 8 \\ +3 \\ \hline 11 \end{array}$$


A diagram showing 8 vertical tally marks in the top row and 3 vertical tally marks in the bottom row, representing the numbers 8 and 3 respectively.

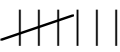
Fractions

$$\begin{array}{r} 1/4 \\ + 2/4 \\ \hline 3/4 \end{array}$$


A diagram showing a fraction bar divided into four equal squares. The top row has one shaded square and three unshaded squares. The bottom row has two shaded squares and two unshaded squares. A bracket above the top row groups the one shaded square and the first unshaded square, representing 1/4. A bracket below the bottom row groups the two shaded squares, representing 2/4. The total shaded area is 3/4.

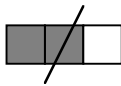
Subtraction

Whole Numbers

$$\begin{array}{r} 6 \\ -3 \\ \hline 3 \end{array}$$


A diagram showing 6 vertical tally marks in the top row and 3 vertical tally marks in the bottom row. A diagonal slash is drawn through the top three tally marks, representing the subtraction of 3 from 6.

Fractions

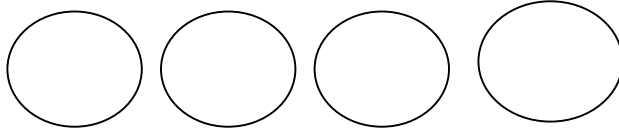
$$\begin{array}{r} 2/3 \\ -1/3 \\ \hline 1/3 \end{array}$$


A diagram showing a fraction bar divided into three equal squares. The top row has two shaded squares and one unshaded square. The bottom row has one shaded square and two unshaded squares. A diagonal slash is drawn through the top row, representing the subtraction of 1/3 from 2/3.

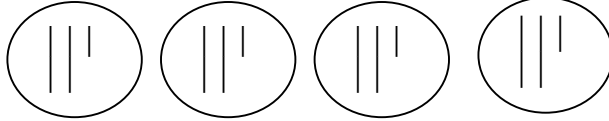
Multiplication

$4 \times 5 = \underline{\quad}$ – “four groups of five equals...”

1. Draw circles for the number of groups.



2 Draw tallies or dots to represent how many are in each group.



3. Add the tallies in all circles and write the total.

$$4 \times 5 = 20 - \text{“four groups of five equals twenty”}$$

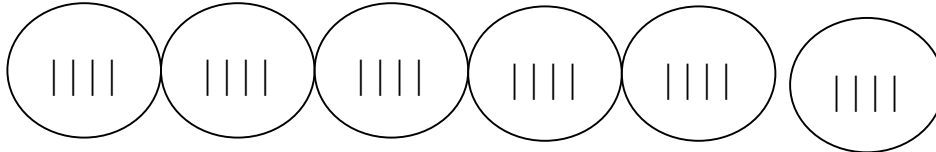
Division

$$24 \div 4 = \underline{\quad}$$

1. Draw tallies or dots to represent dividend (“24”).



2. Circle tallies or dots by the value of the divisor (“4”).



3. Count number of circles (this is your answer - the quotient (“6”).

$$24 \div 4 = 6$$

Write the answer.

- Write down the answer to the problem

This strategy is based on a strategy presented in Mercer, C., & Mercer, A. (1998). Teaching students with learning disabilities. (5th ed). Columbus, O: Merrill.

Learning Toolbox. Steppingstone Technology Grant. James Madison University, MSC 1903, Harrisonburg, VA 22807.