

FAST DRAW for Basic Math

To help me solve word problems.

Find what you are solving for.

- Look for the question mark.
- Underline the information that tells you what you are solving for.
- Look for keywords.
- Underline keywords twice.

Ask yourself what is the important information

- Read each sentence.
- Find number phrases and circle them.

Set up the equation.

- Write the equation with the numbers in the correct order.

Tie down the sign.

- Reread the underlined sentence.
 - Check highlighted key words and operation signs.
 - Say aloud the operation and what the operation means (e.g. “addition means I need to combine the numbers.”)
 - Solve the problem if you can, or draw pictures to solve it using DRAW.
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Discover the sign.

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

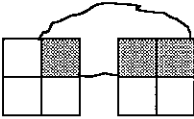
- Answer the problem if you know how to it.
- If you don't know how to solve the problem then draw pictures to solve it.
- For example:

Addition

Whole Numbers

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

Fractions

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


Subtraction

Whole Numbers

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

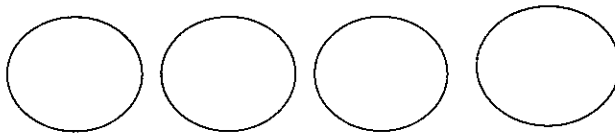
Fractions

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

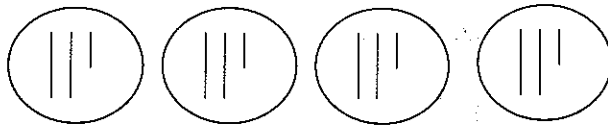

Multiplication

$4 \times 5 = \underline{\quad}$ – “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.

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

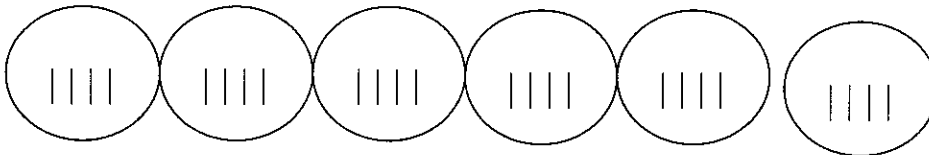
Division

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

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



2. Circles tallies 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.