

addend

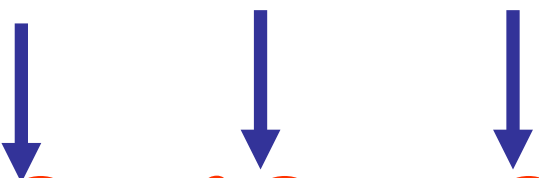
addends sum

$$14 + 15 + 6 = 35$$

One of two or more numbers that are added.

ballpark estimate

$$27 + 39 = 66$$


$$30 + 40 = 70$$

A rough estimate used as a check on the reasonableness of an answer or when an exact figure is not necessary.

change diagram

Start
14

Change
-5

End
9

$$14 - 5 = 9$$

A diagram used to represent situations in which quantities are either increased or decreased.

change-to- less-number story

There were 14 birds in the tree. 5 flew away. How many birds were left?

$$14 - 5 = 9$$

A problem that you need to use a subtraction number model to solve.

change-to- more-number story

There were 14 birds in the tree. 5 more joined them. How many birds were there in all?

$$14 + 5 = 19$$

A problem that you need to use an addition number model to solve.

comparison diagram

Quantity
12

Quantity	Quantity
9	?

$$12 = 9 + ?$$

A diagram used to represent situations in which two quantities are compared.

comparison number story

Beth scored 14 points. Ivy scored 5 points. So Beth scored 9 more points than Ivy.

$$14 - 5 = 9$$

A problem that you need to find the difference between 2 separate quantities.

complement

The complement of 4 is:

$$10 - 4 = 6$$

The complement of 73 is:

$$80 - 73 = 7$$

The difference between a number (n) and the next multiple of 10.

counting-up method

$$8 + 2 = 10$$

"8...9...10"

A strategy to find the sum by counting forward from a given number.

fact
extensions
(higher-decade facts)

$$5 + 8 = 13$$

$$50 + 80 = 130$$

$$500 + 800 = 1300$$

**Calculations of large
numbers using
knowledge of basic
facts.**

fact family

$$3 + 4 = 7$$

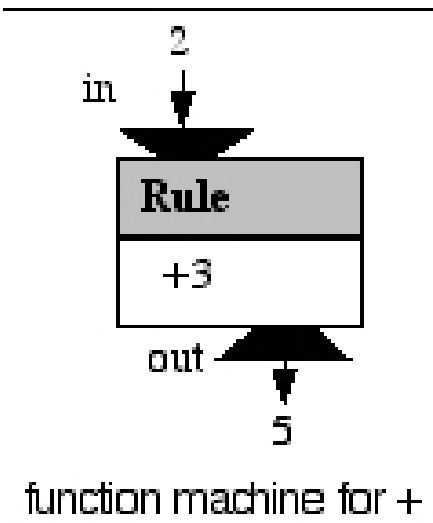
$$4 + 3 = 7$$

$$7 - 4 = 3$$

$$7 - 3 = 4$$

Related addition
and subtraction
facts.

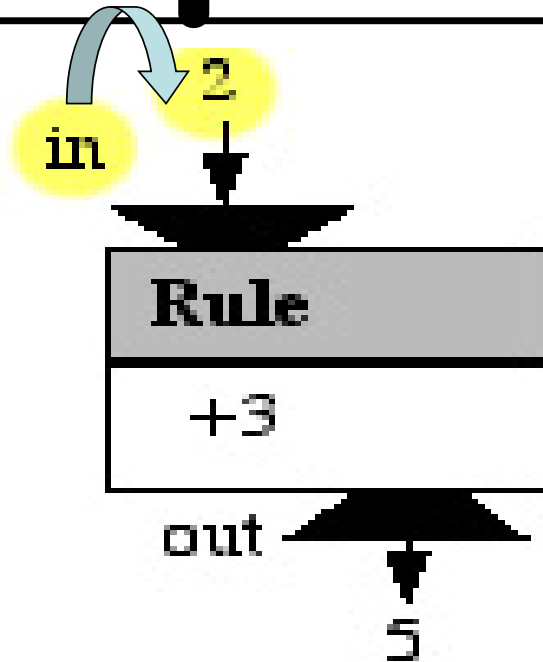
function machine



in	out
2	5
3	6
4	7
15	18
46	49

A number put in is changed into a second number through the use of the rule.

input



function machine for +

A number put
into a function
machine.

label

(measurement unit)

24 children

27 ducks

1 kg

3 o'clock

30 cents

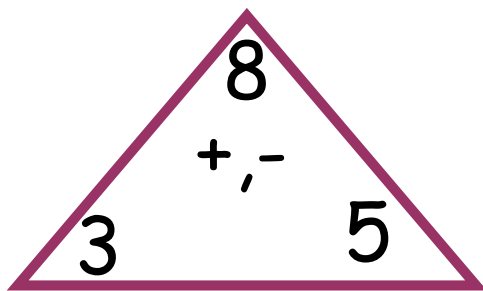
Descriptive word or
phrase used to put
numbers in context.

measurement unit

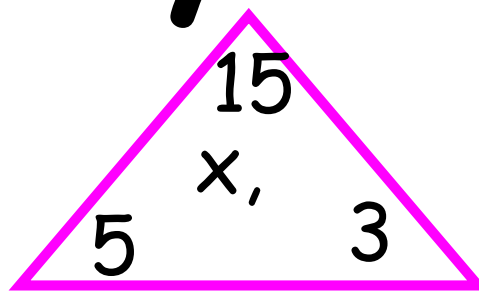


The reference unit used when measuring length, weight, capacity, time or temperature.

number family



$$\begin{aligned}3 + 5 &= 8 \\5 + 3 &= 8 \\8 - 3 &= 5 \\8 - 5 &= 3\end{aligned}$$

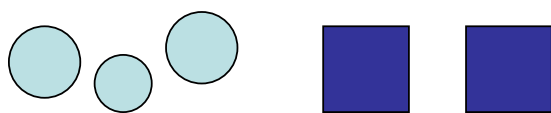


$$\begin{aligned}3 \times 5 &= 15 \\5 \times 3 &= 15 \\15 \div 3 &= 5 \\15 \div 5 &= 3\end{aligned}$$

A triplet of numbers
with two addends and
their sum or two
factors and their
products.

number model

Sara has three round blocks
And 2 square blocks. How
many blocks in all?



number model

$3 + 2 = 5$ blocks

A number
sentence that
models or fits a
situation.

partial-sums algorithm

$$\begin{array}{r} \textcircled{2} \textcircled{6} \textcircled{8} \\ + \textcircled{4} \textcircled{8} \textcircled{3} \\ \hline 6 \ 0 \ 0 \leftarrow 1. \text{ Add } 100\text{'s} \\ 1 \ 4 \ 0 \leftarrow 2. \text{ Add } 10\text{'s} \\ + \quad 1 \ 1 \quad \leftarrow 3. \text{ Add } 1\text{'s} \\ \hline 7 \ 5 \ 1 \leftarrow \text{Add partial sum} \end{array}$$

An addition procedure in which sums are computed for each place separately and then added to find the sum.

part-and-total diagram

Total	
50	
Par	Part
24	26

A diagram used in problems when two or more quantities are combined to form a total quantity.

trade-first subtraction

$$\begin{array}{r} 10^3 \quad 1^3 \\ 6 \\ 7 \overline{) 11} \\ - 46 \\ \hline \end{array} \quad \leftarrow \quad \begin{array}{r} 100^3 \quad 10^3 \quad 1^3 \\ 2 \quad 10 \quad 11 \\ 3 \overline{) 111} \\ - 77 \\ \hline \end{array} \quad \leftarrow$$

Subtraction procedure in which all necessary trades are done before any subtractions are carried out.

turn-around facts

$$\begin{array}{c} 6 + 3 \\ \swarrow \quad \searrow \\ 3 + 6 \end{array}$$

$$\begin{array}{c} 2 \times 3 \\ 3 \times 2 \end{array}$$

$$\begin{array}{c} 143 + 23 \\ 23 + 143 \end{array}$$

$$\begin{array}{c} 234 \times 5 \\ 5 \times 234 \end{array}$$

A pair of addition or multiplication facts in which the order of the addends or the factors is reversed.

unit box

Unit
cents

Unit
dogs

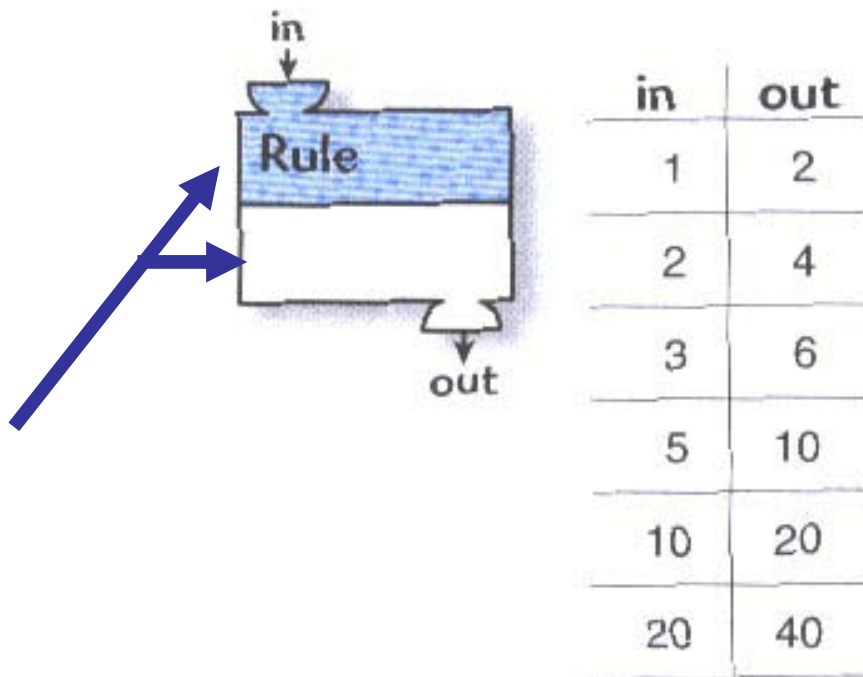
Unit
days

Unit
bats

Unit
inches

A box displayed
alongside a set of
numbers or problems.

"What's My Rule?"



"What's My Rule?" problem

A routine that involves a set of number pairs in which the numbers in each pair are related to each other according to the same rule.