

Word problems with carrying

Example 1:

There are 22 bananas in a shop. A boy comes to buy 6 bananas. How many bananas are left?

Solution :

Initial number of bananas in the shop

$$= \begin{array}{r} 22 \\ \hline \end{array}$$

Number of bananas bought by the boy

$$= \begin{array}{r} 06 \\ \hline \end{array}$$


Number of bananas left

$$= \begin{array}{r} \\ \hline \end{array}$$

$$2 < 6$$

Borrow from tens place.

After borrowing,

2 becomes 12
2 becomes 1

Initial number of bananas in the shop

$$= \begin{array}{r} 12 \\ \cancel{2} \cancel{2} \\ \hline \end{array}$$

Number of bananas bought by the boy

$$= \begin{array}{r} 06 \\ \hline \end{array} \quad \begin{array}{l} 12 - 6 = 6 \\ 1 - 0 = 1 \end{array}$$

Number of bananas left

$$= \begin{array}{r} 16 \\ \hline \end{array}$$

Therefore, there are 16 bananas left in the shop.

Example 2:

A baker has 13 cookies. He sells 5 cookies. How many cookies does she have left?

Solution :

The number of cookies the baker has = 1 3



Number of cookies the baker sells = 0 5



Number of cookies the baker has left =

$$3 < 5$$

Borrow from tens place.

After borrowing,

3 becomes 13
1 becomes 0

The number of cookies the baker has = ~~1~~ ~~3~~

Number of cookies the baker sells = 0 5

Number of cookies the baker has left = 0 8

$$\begin{aligned} 13 - 5 &= 8 \\ 0 - 0 &= 0 \end{aligned}$$

Therefore, the baker has 8 cookies left.



Example 3:

In a first-grade class with 96 students, 39 are boys. How many are girls?

Solution :



$$\begin{array}{r}
 \text{Total number of students in the class} = 96 \\
 \text{Number of boys in the class} = 39 \\
 \text{Number of girls in the class} = \underline{\hspace{2cm}}
 \end{array}$$

$$6 < 9$$

Borrow from tens place.

After borrowing,

6 becomes 16
9 becomes 8

$$\begin{array}{r}
 \text{Total number of students in the class} = \begin{array}{r} 8 \ 16 \\ \cancel{9} \ \cancel{6} \\ - \end{array} \\
 \text{Number of boys in the class} = \begin{array}{r} 3 \ 9 \\ - \end{array} \quad \begin{array}{l} 16 - 9 = 7 \\ 8 - 3 = 5 \end{array} \\
 \text{Number of girls in the class} = \begin{array}{r} 5 \ 7 \\ \hline \end{array}
 \end{array}$$

Therefore, there are **57** girls in the class.



Example 4:

A library has 55 books in mathematics. They donate 18 books to a local school. How many books are left in the library?

Solution :



| | | | | |
|------------------------------------|---|---|---|---|
| The number of books in the library | = | 5 | 5 | |
| The number of books that donated | = | 1 | 8 | - |
| The number of books left | = | | | |

$$5 < 8$$

Borrow from tens place.

After borrowing,

5 becomes 15
5 becomes 4

| | | | | |
|------------------------------------|---|--------------|--------------|---|
| | | 4 | 15 | |
| The number of books in the library | = | 5 | 5 | - |
| The number of books that donated | = | 1 | 8 | - |
| The number of books left | = | 3 | 7 | - |

$$15 - 8 = 7$$

$$4 - 1 = 3$$

Therefore, there are 37 books left in the library.



Example 5:

A carpenter has 62 nails. He uses 36 nails to build a birdhouse. How many nails does he have left?

Solution :

Initial number of nails

$$= 62$$



Number of nails used for the birdhouse

$$= 36$$

Number of nails left

$$=$$

$$2 < 6$$

Borrow from tens place.

After borrowing,

2 becomes 12
6 becomes 5

Initial number of nails

$$= \begin{array}{r} 5 \ 12 \\ \cancel{6} \ \cancel{2} \\ \hline \end{array}$$

Number of nails used for the birdhouse

$$= \begin{array}{r} 3 \ 6 \\ \hline \end{array} \quad \begin{array}{l} 12 - 6 = 6 \\ 5 - 3 = 2 \end{array}$$

Number of nails left

$$= \begin{array}{r} 2 \ 6 \\ \hline \end{array}$$

Therefore, the carpenter has **26** nails left.