14. Division : Part 2

❁ Word Problems.

◆ **Divide 56 notebooks equally among 7 students. How many will each get ?**

$$\begin{array}{r} 8 \\ 7\overline{)\,56} \\ \underline{-\,56} \\ 00 \end{array}$$

Each one gets 8.

Exercise

Solve the following problems.

1. If the total cost of three compass boxes is ₹90, what is the cost of one compass box ?

$3\overline{)\,90}$

2. If four kilograms of wheat cost ₹92, what is the cost of one kilogram of wheat ?

$4\overline{)\,92}$

3. If 31 litres of milk are poured into 4-litre vessels, how many such vessels will be completely filled and how much milk will there be in the partly filled vessel ?

$4\overline{)\,31}$

4. If 49 seedlings are to be planted in a garden in rows of 7 saplings each, how many such rows will be made ?

$7\overline{)\,49}$

5. If 40 children stand in 5 equal rows for a drill, how many children will there be in each row ?

$5\overline{)\,40}$

6. There are 87 beads. How many necklaces of 9 beads each can be made and how many beads will be left over?

$9\overline{)\,87}$

Dividing a three-digit number by a one-digit number

Madhu has three hundred-rupee notes, six ten-rupee notes and nine one-rupee coins totalling ₹369. How should she divide it equally between Neena, Beena and Nagesh ?

```
  123
3)369
 -3↓
 ---
  06
 - 6↓
 ---
  009
  - 9
  ---
    00
```

First let us divide the 3 notes of 100 rupees.
3 ÷ 3 = 1, or, 3 can be divided by 3 once. That means each person gets one note of 100 rupees.
6 ten-rupee notes have to be divided between three people.
6 ÷ 3 = 2, so each person will get 2 notes of 10 rupees or 20 rupees.
9 rupees have to be divided between three people.
9 ÷ 3 = 3. Each person will get 3 rupees.
Each person gets 100 rupees + 20 rupees + 3 rupees = 123 rupees.
This division is shown vertically alongside.
The quotient is 123, so each person will receive ₹123.

Exercise

Divide the following.

(1) $4\overline{)484}$ (2) $3\overline{)396}$ (3) $4\overline{)448}$ (4) $2\overline{)468}$

◆ **Now let us divide 4 notes of 100 rupees, 6 notes of 10 rupees and 5 coins of 1 rupee, totalling ₹465 between 5 people.**

```
  0
5)465
 -0
 ---
  4
```

In these 465 rupees, there are 4 notes of 100 rupees. 5 can only be taken zero times from 4. This means that no one can get a 100-rupee note. Let us put a 0 in the hundreds place of the quotient.

```
  09
5)465
 -0↓
 ---
  46
- 45
 ---
  01
```

We change 4 notes of 100 rupees for 10-rupee notes. Those 40 notes and the 6 notes we already have make a total of 46 ten-rupee notes. Let us divide them among 5 people. 5 can be subtracted from 46 a maximum of 9 times. 9 times 5 is 45. So, 46 – 45 = 1, and 1 note of 10 rupees remains.

```
  093
5)465
 -0↓
 ---
  46
- 45↓
 ---
  015
 - 15
 ---
   00
```

We change this 10-rupee note for ten 1-rupee coins and add the 5 coins that we already have, making a total of 15 one-rupee coins to divide among 5 people. Thrice 5 is 15. Therefore, we can subtract 5, 3 times.

15 – 15 = 0. The quotient is 93.

When ₹465 are divided among 5 people, each person gets ₹93.

```
   2
3) 629
 - 6↓
   02
```

```
   209
3) 629
 - 6↓
   02
 -  0
   029
 - 27
   002
```

◆ Find : 629 ÷ 3

Divide the hundreds, tens and units in that order by 3.

Twice 3 is 6, so 6 can be divided by 3. We write 2 in the hundreds place of the quotient. Now let's bring down 2 tens and divide.

3 can be taken zero times from 2. Therefore, let us write 0 in the tens place of the quotient. 2 – 0 = 2, so 2 tens remain.
20 units from 2 tens and the 9 units we already have make a total of 29 units to be divided by 3. 9 times 3 is 27.
29 – 27 = 2.

Therefore, the quotient is 209 and the remainder is 2.

Exercise

Divide.

(1) $4\overline{)494}$ (2) $2\overline{)815}$ (3) $3\overline{)242}$ (4) $5\overline{)455}$

(5) $6\overline{)578}$ (6) $8\overline{)945}$ (7) $7\overline{)647}$ (8) $4\overline{)908}$

```
   4
2) 800
 - 8
   00
```

```
   40
2) 800
 - 8
   00
 - 00
   000
```

```
   400
2) 800
 - 8
   00
 - 00
   000
 - 000
   000
```

◆ 800 ÷ 2 = How much?

The dividend is 800 and the divisor is 2.
Let us divide 8H by 2; four times 2 is 8, so we write 4 in the hundreds place of the quotient.
8 – 8 = 0. Zero hundreds remain.

Now let us divide zero tens by 2; zero divided by any number is zero. Let us write zero in the tens place of the quotient.

Similarly, zero units divided by 2 is 0. Therefore, let us write 0 in the units place of the quotient. The quotient is 400 and the remainder is zero.

If, while dividing 800 ÷ 2, we do not put zeroes in the tens and units places, the quotient could be written by mistake as 40, or even 4, instead of 400.

Remember: While dividing, in case a number is divided zero times, write the zero in the correct place in the quotient.

Exercise

Divide the following.

(1) 500 ÷ 5 (2) 900 ÷ 6 (3) 120 ÷ 4

Word Problems

◆ **If 148 marbles were distributed, giving 4 to each child, how many children were given marbles ?**

$$\begin{array}{r} 037 \\ 4\overline{)\,148} \\ -\,0\downarrow \\ \hline 14 \\ -\,12 \\ \hline 028 \\ -\,28 \\ \hline 00 \end{array}$$

Exercise

Solve the problems given below.

(1) If 126 peppermint sweets are divided equally between 9 children, how many sweets will each child get?

$9\overline{)\,126}$

(2) In a field, if 987 saplings are planted in 7 rows with an equal number of seedlings in each row, how many seedlings are planted in each row?

$7\overline{)\,987}$

(3) If a hostel has 132 students with 3 students in one room, in how many rooms are the students staying ?

$3\overline{)\,132}$

(4) How many bouquets can be made from 340 flowers, with 8 flowers in each bouquet? How many flowers will be left over ?

$8\overline{)\,340}$

(5) If we put 6 biscuits in one packet, how many packets can be made from 600 biscuits?

$6\overline{)\,600}$