

14. Division : Part 2



❁ Word Problems.

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

Each one gets 8.

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

Exercise

Solve the following problems.

1. If the total cost of three compass boxes is ₹90, what is the cost of one compass box ?
2. If four kilograms of wheat cost ₹92, what is the cost of one kilogram of wheat ?
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. If 49 seedlings are to be planted in a garden in rows of 7 saplings each, how many such rows will be made ?
5. If 40 children stand in 5 equal rows for a drill, how many children will there be in each row ?
6. There are 87 beads. How many necklaces of 9 beads each can be made and how many beads will be left over?

$$3 \overline{) 90}$$

$$4 \overline{) 92}$$

$$4 \overline{) 31}$$

$$7 \overline{) 49}$$

$$5 \overline{) 40}$$

$$9 \overline{) 87}$$

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 ?

$$\begin{array}{r}
 123 \\
 3 \overline{) 369} \\
 \underline{- 3} \\
 06 \\
 \underline{- 6} \\
 009 \\
 \underline{- 9} \\
 00
 \end{array}$$

First let us divide the 3 notes of 100 rupees.

$3 \div 3 = 1$, 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.

$6 \div 3 = 2$, so each person will get 2 notes of 10 rupees or 20 rupees.

9 rupees have to be divided between three people.

$9 \div 3 = 3$. 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.

$$\begin{array}{r}
 0 \\
 5 \overline{) 465} \\
 \underline{- 0} \\
 4
 \end{array}$$

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.

$$\begin{array}{r}
 09 \\
 5 \overline{) 465} \\
 \underline{- 0} \\
 46 \\
 \underline{- 45} \\
 01
 \end{array}$$

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.

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.

$$\begin{array}{r}
 093 \\
 5 \overline{) 465} \\
 \underline{- 0} \\
 46 \\
 \underline{- 45} \\
 015 \\
 \underline{- 15} \\
 00
 \end{array}$$

$$\begin{array}{r} 2 \\ 3 \overline{) 629} \\ \underline{-6} \downarrow \\ 02 \end{array}$$

$$\begin{array}{r} 209 \\ 3 \overline{) 629} \\ \underline{-6} \downarrow \\ 02 \\ \underline{-0} \\ 029 \\ \underline{-27} \\ 002 \end{array}$$

◆ Find : $629 \div 3$

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) $4 \overline{) 908}$

$$\begin{array}{r} 4 \\ 2 \overline{) 800} \\ \underline{-8} \\ 00 \end{array}$$

$$\begin{array}{r} 40 \\ 2 \overline{) 800} \\ \underline{-8} \\ 00 \\ \underline{-00} \\ 000 \end{array}$$

$$\begin{array}{r} 400 \\ 2 \overline{) 800} \\ \underline{-8} \\ 00 \\ \underline{-00} \\ 000 \\ \underline{-000} \\ 000 \end{array}$$

◆ $800 \div 2 =$ 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.

$$8 - 8 = 0. \text{ Zero hundreds remain.}$$

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 $800 \div 2$, 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) $500 \div 5$

(2) $900 \div 6$

(3) $120 \div 4$

Word Problems

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

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

Exercise

Solve the problems given below.

- (1) If 126 peppermint sweets are divided equally between 9 children, how many sweets will each child get?
- (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?
- (3) If a hostel has 132 students with 3 students in one room, in how many rooms are the students staying ?
- (4) How many bouquets can be made from 340 flowers, with 8 flowers in each bouquet? How many flowers will be left over ?
- (5) If we put 6 biscuits in one packet, how many packets can be made from 600 biscuits?

$$9 \overline{) 126}$$

$$7 \overline{) 987}$$

$$3 \overline{) 132}$$

$$8 \overline{) 340}$$

$$6 \overline{) 600}$$