

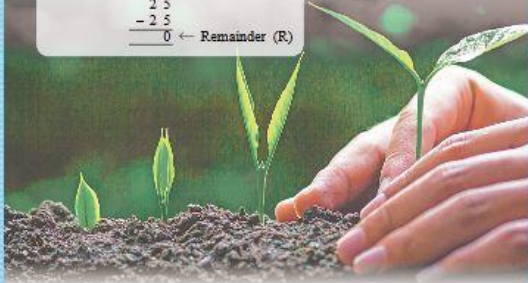


Warm Up

- Abhishek planted 225 plants equally in 5 rows. Find the number of plants in each row.

Number of plants = 225, Number of rows = 5
 Number of plants in each row = $225 \div 5 = 45$

$$\begin{array}{r} 45 \leftarrow \text{Quotient (Q)} \\ \text{Divisor } \rightarrow 5 \overline{) 225} \leftarrow \text{Dividend} \\ \underline{-20} \\ 25 \\ \underline{-25} \\ 0 \leftarrow \text{Remainder (R)} \end{array}$$



- Divide using the long division method. **ANS**

- | | | | |
|-----------------|-----------------|-----------------|-----------------|
| 1. $350 \div 7$ | 2. $225 \div 6$ | 3. $382 \div 9$ | 4. $616 \div 8$ |
| 5. $222 \div 2$ | 6. $345 \div 3$ | 7. $678 \div 5$ | 8. $893 \div 4$ |

DIVISION BY A 1-DIGIT DIVISOR

EXAMPLE 1 Divide 8232 by 3.

Step 1 Take 8 from the thousands place of the dividend and divide by 3. From the table of 3, $3 \times 2 = 6$, $3 \times 3 = 9$, $9 > 8$ but $6 < 8$. So, take $3 \times 2 = 6$. Write 2 in the thousands place of the quotient. $8 - 6 = 2$. Write 2 as the difference.

$$\begin{array}{r} 2 \\ 3 \overline{) 8232} \\ \underline{-6} \\ 2 \end{array}$$

Step 2 Bring down 2 from the hundreds place of the dividend. Divide 22 hundreds by 3. From the table of 3, $3 \times 7 = 21$, $3 \times 8 = 24$, $24 > 22$ but $21 < 22$. So, take $3 \times 7 = 21$. Write 7 in the hundreds place of the quotient. $22 - 21 = 1$. Write 1 as the difference.

$$\begin{array}{r} 27 \\ 3 \overline{) 8232} \\ \underline{-6} \\ 22 \\ \underline{-21} \\ 1 \end{array}$$

Step 3 Bring down 3 from the tens place of the dividend.

$$\begin{array}{r} 274 \\ 3 \overline{) 8232} \\ \underline{-6} \\ 22 \\ \underline{-21} \\ 13 \\ \underline{-12} \\ 1 \end{array}$$

Divide 13 tens by 3. From the table of 3, $3 \times 4 = 12$, $3 \times 5 = 15$, $15 > 13$ but $12 < 13$. So, take $3 \times 4 = 12$. Write 4 in the tens place of the quotient. $13 - 12 = 1$. Write 1 as the difference.

$$\begin{array}{r} 2744 \\ 3 \overline{) 8232} \\ \underline{-6} \\ 22 \\ \underline{-21} \\ 13 \\ \underline{-12} \\ 12 \\ \underline{-12} \\ 0 \end{array}$$

Step 4 Bring down 2 from the ones place of the dividend. Divide 12 ones by 3. From the table of 3, $3 \times 4 = 12$. So, write 4 in the ones place of the quotient. $12 - 12 = 0$. Write 0 as the remainder.

ANS. Q = 2744, R = 0

DIVISION FACTS



When a number is divided by 1, the quotient is the number itself.

$$23 \div 1 = 23 \quad 578 \div 1 = 578 \quad 4796 \div 1 = 4796$$



When a number is divided by itself, the quotient is 1.

$$14 \div 14 = 1 \quad 623 \div 623 = 1 \quad 3674 \div 3674 = 1$$



When 0 is divided by any number, the quotient is 0.

$$0 \div 23 = 0 \quad 0 \div 578 = 0 \quad 0 \div 6279 = 0$$





Division and multiplication are related. Every multiplication fact has two division facts.

$$16 \div 7 = 112 \quad 112 \div 7 = 16 \quad 149 \div 8 = 1192 \quad 1192 \div 8 = 149$$

$$112 \div 16 = 7 \quad 1192 \div 149 = 8$$



A number cannot be divided by 0. Division by 0 is meaningless.

CHECKING DIVISION

If Quotient \times Divisor + Remainder = Dividend, then the division is correct. The remainder is always smaller than the divisor. If not, check the division again.

EXAMPLE 2 Divide 6686 by 4.
Check your answer.

$$\begin{array}{r} 1671 \\ 4 \overline{) 6686} \\ \underline{-4} \\ 26 \\ \underline{-24} \\ 28 \\ \underline{-28} \\ 06 \\ \underline{-4} \\ 2 \end{array}$$

Step 1 $4 \div 1 = 4$
Step 2 $4 \div 6 = 24$
Step 3 $4 \div 7 = 28$
Step 4 $4 \div 1 = 4$

Check: 1671 (Quotient) $\times 4$ (Divisor) + 2 (Remainder) = 6686 (Dividend)

EXAMPLE 3 Divide 3021 by 6.
Check your answer.

$$\begin{array}{r} 503 \\ 6 \overline{) 3021} \\ \underline{-30} \\ 02 \\ \underline{-0} \\ 21 \\ \underline{-18} \\ 3 \end{array}$$

Step 1 $3 < 6$. So, start with 30 as the dividend. $6 \div 3 = 30$
Step 2 $2 < 6$. So, the quotient of step 2 is 0. $6 \div 0 = 0$
Step 3 $6 \div 3 = 18$

Check: 503 (Quotient) $\times 6$ (Divisor) + 3 (Remainder) = 3021 (Dividend)



Exercise 4.1

A. Find the quotient and the remainder, if any. ANS

- $8448 \div 4$
- $5650 \div 5$
- $7384 \div 6$
- $9691 \div 3$
- $9242 \div 8$
- $8743 \div 7$
- $9543 \div 3$
- $4568 \div 2$
- $8616 \div 6$
- $7550 \div 4$
- $5120 \div 7$
- $6818 \div 9$
- $7424 \div 4$
- $6005 \div 5$
- $9432 \div 7$
- $5383 \div 6$



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B. Divide and check your answer. ANS

- $7856 \div 5$
- $6334 \div 4$
- $6490 \div 3$
- $2358 \div 7$
- $4579 \div 9$
- $7296 \div 8$
- $9786 \div 9$
- $2675 \div 9$
- $9032 \div 7$
- $2153 \div 2$
- $7595 \div 6$
- $8437 \div 8$
- $3648 \div 4$
- $1059 \div 3$
- $2416 \div 6$
- $4040 \div 3$

DIVISION BY 10, 100 AND 1000

Division by 10

When a number is divided by 10, the digit in the ones place makes up the remainder, the rest of the digits make up the quotient.

EXAMPLE 4 Find $147 \div 10$.

$$\begin{array}{r} 14 \\ 10 \overline{) 147} \\ \underline{-10} \\ 47 \\ \underline{-40} \\ 7 \end{array}$$

ANS. Q = 14, R = 7



EXAMPLE 5 Find $6565 \div 10$.

$$\begin{array}{r} 656 \\ 10 \overline{) 6565} \\ \underline{-60} \\ 56 \\ \underline{-50} \\ 65 \\ \underline{-60} \\ 5 \end{array}$$

ANS. Q = 656, R = 5

Division by 100

When a number is divided by 100, the digits in the tens and ones place make up the remainder, the rest of the digits make up the quotient.

EXAMPLE 6 Find $247 \div 100$.

$$\begin{array}{r} 2 \\ 100 \overline{) 247} \\ \underline{-200} \\ 47 \end{array}$$

ANS. Q = 2, R = 47



EXAMPLE 7 Find $1382 \div 100$.

$$\begin{array}{r} 13 \\ 100 \overline{) 1382} \\ \underline{-100} \\ 38 \\ \underline{-30} \\ 82 \\ \underline{-80} \\ 2 \end{array}$$

ANS. Q = 13, R = 82



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Division by 1000

When a number is divided by 1000, the digits in the hundreds, tens and ones place make up the remainder, the rest of the digits make up the quotient.

EXAMPLE 8 Find $6472 \div 1000$.

$$\begin{array}{r} 6 \\ 1000 \overline{) 6472} \\ \underline{-6000} \\ 472 \end{array}$$

ANS. Q = 6
R = 472



EXAMPLE 9 Find $35487 \div 1000$.

$$\begin{array}{r} 35 \\ 1000 \overline{) 35487} \\ \underline{-3000} \\ 5487 \\ \underline{-5000} \\ 487 \end{array}$$

ANS. Q = 35, R = 487

I Can Do It!

Find the quotient and remainder without doing long division. **ANS**

- | | | |
|----------------------|-----------------------|-----------------------|
| 1. $1350 \div 10$ | 2. $4107 \div 10$ | 3. $6781 \div 10$ |
| 4. $9999 \div 10$ | 5. $4109 \div 100$ | 6. $3075 \div 100$ |
| 7. $9092 \div 100$ | 8. $9999 \div 100$ | 9. $1005 \div 1000$ |
| 10. $7088 \div 1000$ | 11. $59456 \div 1000$ | 12. $99999 \div 1000$ |

DIVISION BY A 2-DIGIT DIVISOR BY ESTIMATION

Estimating quotients is helpful in division by a 2-digit divisor.

EXAMPLE 10 Estimate the quotient in $74 \div 21$.

Step 1 Round off the numbers.

$$74 \div 21 \rightarrow 70 \div 20$$

Step 2 Cancel '0'.

$$7\cancel{0} \div 2\cancel{0} \rightarrow 7 \div 2$$

Step 3 Divide 7 by 2.

$$\begin{array}{r} 3 \\ 2 \overline{) 7} \\ \underline{-6} \\ 1 \end{array}$$

ANS. Estimated quotient = 3



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EXAMPLE 11 Estimate the quotient in $639 \div 47$.

Step 1 Round off the numbers.

$$639 \div 47 \rightarrow 600 \div 50$$

Step 2 Cancel '0' in the ones place.

$$60\cancel{0} \div 5\cancel{0} \rightarrow 60 \div 5$$

Step 3 Divide 60 by 5.

ANS. Estimated quotient = 12

$$\begin{array}{r} 12 \\ 5 \overline{) 60} \\ \underline{-5} \\ 10 \\ \underline{-10} \\ 0 \end{array}$$



Exercise 4.2

A. Match the columns as shown. **ANS**

Question	Rounded off to the nearest 10 or 100	Division	Estimated quotient
1. $86 \div 27$	<input type="radio"/> 200 \div 20	<input type="radio"/> $90 \div 4$	<input type="radio"/> 3
2. $91 \div 36$	<input type="radio"/> 300 \div 40	<input type="radio"/> $9 \div 3$	<input type="radio"/> 7
3. $193 \div 24$	<input type="radio"/> 900 \div 40	<input type="radio"/> $9 \div 4$	<input type="radio"/> 22
4. $315 \div 43$	<input type="radio"/> 90 \div 30	<input type="radio"/> $20 \div 2$	<input type="radio"/> 2
5. $868 \div 37$	<input type="radio"/> 90 \div 40	<input type="radio"/> $30 \div 4$	<input type="radio"/> 10

B. Fill in the table and estimate the quotient. **ANS**

Question	Rounded off to the nearest 10 or 100	Estimated quotient	Actual quotient
1. $78 \div 18$	+		
2. $289 \div 69$	+		
3. $753 \div 29$	+		



Life Skills

Sudesh has collected ₹2560 to donate to a hospital. He has notes of ₹100 and ₹20. If he has 6 notes of ₹100, how many notes of ₹20 does he have? **ANS**



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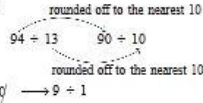
ACTUAL DIVISION BY A 2-DIGIT DIVISOR

EXAMPLE 12 Find $94 \div 13$. Check your answer.

Step 1 Estimate the quotient.

Round off the numbers to estimate the quotient.

Cancel '0' and divide 9 by 1. $90 \div 10$
 $9 \div 1 = 9$. Estimated quotient = 9



Step 2 Find the actual quotient.

Multiply the divisor by the estimated quotient. $13 \times 9 = 117$

$117 > 94$ (dividend), so multiply 13 by 8. $13 \times 8 = 104$

$104 > 94$, so, multiply 13 by 7. $13 \times 7 = 91$

$91 < 94$. So, actual quotient = 7

$$\begin{array}{r} 13 \overline{) 94} \\ \underline{-91} \\ 3 \end{array}$$

Step 3

Check:

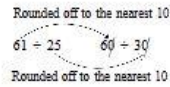
$7 \times 13 + 3 = 91 + 3 = 94$ (dividend)

ANS. Q = 7, R = 3

EXAMPLE 13 Find $613 \div 25$. Check your answer.

Step 1 Estimate the quotient.

Cancel '0' and divide 6 by 3. $60 \div 3 = 20$.
 Estimated quotient = 2



Step 2 Find the actual quotient.

Multiply the divisor by the estimated quotient. $25 \times 2 = 50$, $50 < 61$

Try by multiplying the divisor by 3. $25 \times 3 = 75$, $75 > 61$

Since $75 > 61$, actual quotient = 2

Step 3 Now, you have to find $113 \div 25$.

For this repeat steps 1 and 2.

$$\begin{array}{r} 25 \overline{) 613} \\ \underline{-50} \\ 113 \end{array}$$

Rounded off to the nearest 10

$113 \div 25$ $110 \div 30$

Cancel '0' and divide 11 by 3.

$11 \div 3 = 3$. Estimated quotient = 3

Rounded off to the nearest 10

Multiply the divisor by the estimated quotient.

$75 < 113$, so multiply the divisor by 4.

$100 < 113$, so multiply the divisor by 5.

Since $125 > 113$, so actual quotient = 4

$25 \times 3 = 75$

$25 \times 4 = 100$

$25 \times 5 = 125$

$$\begin{array}{r} 25 \overline{) 613} \\ \underline{-50} \\ 113 \\ \underline{-100} \\ 13 \end{array}$$

Step 4 Check:

$24 \times 25 + 13 = 600 + 13 = 613$ (dividend)

ANS. Q = 24, R = 13

EXAMPLE 14 Divide 2708 by 19. Check your answer.

$$\begin{array}{r} 19 \overline{) 2708} \\ \underline{-19} \\ 80 \\ \underline{-76} \\ 48 \\ \underline{-38} \\ 10 \end{array}$$

Check:

$142 \times 19 + 10 = 2698 + 10 = 2708$ (dividend)

ANS. Q = 142, R = 10

Maths Online

For more division sums, visit rsgr.in/lm4-3



EXAMPLE 15 Divide 5487 by 77.

Step 1 Decide

$54 < 77$, so start with 548 as dividend.

Step 2 Think

Think $77 \overline{) 548}$ or, $77 \overline{) 548}$

$7 \times 7 = 49$, $7 \times 8 = 56$

$49 < 54$, so find 77×7 .

Step 3 Bring down

Bring down 7. Think $77 \overline{) 5487}$ or $77 \overline{) 5487}$

$7 \times 1 = 7$, $7 \times 2 = 14$

$7 < 9$, so find 77×1

Check:

$71 \times 77 + 20 = 5467 + 20 = 5487$ (dividend)

ANS. Q = 71, R = 20

$$\begin{array}{r} 77 \overline{) 5487} \\ \underline{-539} \\ 9 \end{array}$$

$$\begin{array}{r} 77 \overline{) 5487} \\ \underline{-539} \\ 97 \\ \underline{-77} \\ 20 \end{array}$$





Exercise 4.3

- A. Divide to find the quotient and the remainder, if any.** **ANS**
- $92 \div 14$
 - $89 \div 42$
 - $82 \div 29$
 - $95 \div 40$
 - $97 \div 25$
 - $63 \div 35$
 - $94 \div 23$
 - $85 \div 40$
 - $86 \div 43$
 - $93 \div 31$
 - $74 \div 24$
 - $67 \div 56$
- B. Divide to find the quotient and the remainder, if any.** **ANS**
- $104 \div 21$
 - $345 \div 42$
 - $169 \div 27$
 - $257 \div 35$
 - $735 \div 81$
 - $433 \div 44$
 - $460 \div 56$
 - $304 \div 62$
 - $607 \div 38$
 - $231 \div 57$
 - $952 \div 82$
 - $904 \div 77$
- C. Divide and check your answer.** **ANS**
- $82 \div 17$
 - $93 \div 16$
 - $63 \div 41$
 - $72 \div 25$
 - $567 \div 21$
 - $278 \div 14$
 - $579 \div 18$
 - $426 \div 51$
 - $175 \div 25$
 - $735 \div 16$
 - $525 \div 22$
 - $695 \div 23$
- D. Divide and check your answer.** **ANS**
- $3533 \div 27$
 - $9084 \div 62$
 - $6394 \div 41$
 - $8841 \div 52$
 - $5204 \div 93$
 - $3374 \div 29$
 - $6400 \div 48$
 - $2089 \div 53$
 - $3708 \div 18$
 - $4110 \div 17$
 - $4424 \div 28$
 - $6301 \div 75$

STORY SUMS

EXAMPLE 16 Rohit has 525 stamps. He wants to paste them in a stamp album. On one page he can paste 25 stamps. How many pages will he need to paste all the stamps?

$$\text{Total number of stamps} = 525$$

$$\text{Number of stamps on one page} = 25$$

$$\text{Number of pages needed} = 525 \div 25$$

ANS. 21 pages are needed to paste 525 stamps.

$$\begin{array}{r} 21 \\ 25 \overline{) 525} \\ \underline{- 50} \\ 25 \\ \underline{- 25} \\ 0 \end{array}$$



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EXAMPLE 17 If 15 books can be kept on one shelf, how many such shelves are needed for 755 books?

$$\text{Total number of books} = 755$$

$$\text{Number of books on one shelf} = 15$$

$$\text{Number of shelves needed} = 755 \div 15$$

The quotient is 50 but 5 books are left over (remainder).

1 more shelf is needed for the leftover books.

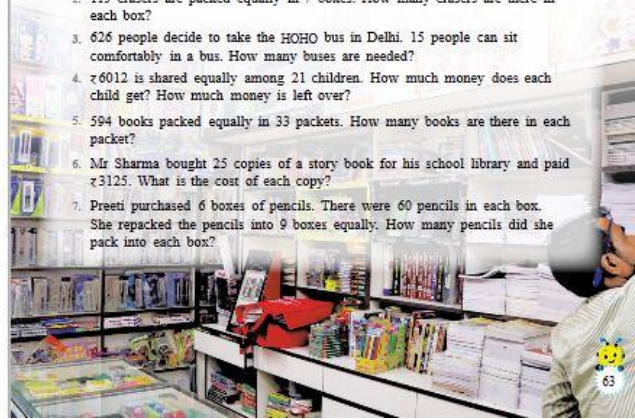
Hence, $50 + 1 = 51$ shelves are needed for 755 books.

$$\begin{array}{r} 50 \\ 15 \overline{) 755} \\ \underline{- 75} \\ 05 \\ \underline{- 0} \\ 5 \end{array}$$



Exercise 4.4

- Solve these story sums.** **ANS**
- 156 students participated in a quiz competition. 6 students formed a team. How many teams were there?
 - 119 erasers are packed equally in 7 boxes. How many erasers are there in each box?
 - 626 people decide to take the HOHO bus in Delhi. 15 people can sit comfortably in a bus. How many buses are needed?
 - ₹6012 is shared equally among 21 children. How much money does each child get? How much money is left over?
 - 594 books packed equally in 33 packets. How many books are there in each packet?
 - Mr Sharma bought 25 copies of a story book for his school library and paid ₹3125. What is the cost of each copy?
 - Preeti purchased 6 boxes of pencils. There were 60 pencils in each box. She repacked the pencils into 9 boxes equally. How many pencils did she pack into each box?



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Maths Lab Activity

Aim: To recall division facts

You will need: Blackboard, chalk

Preparation: The students form pairs to work.

Steps

1. The students think and discuss what the dividend and divisor could be, for example $\text{ } \div \text{ } = 5$

2. The students write their answers on the blackboard, for example

$$10 \div 2 = 5 \quad 15 \div 3 = 5$$

$$20 \div 4 = 5 \quad 25 \div 5 = 5$$

3. The students can check their answers by multiplication, for example $5 \times 5 = 25$, $5 \times 6 = 30$ and so on.

The students can be asked to solve the following questions.

$$10 \div 2 = 3 \quad 15 \div 3 = 10 \quad 20 \div 4 = 8 \quad 25 \div 5 = 4$$

$$30 \div 6 = 6 \quad 35 \div 7 = 7 \quad 40 \div 8 = 1 \quad 45 \div 9 = 9$$

PROJECT

Find out the length of the 5 longest rivers of India. Where do they start from? Where do they end? Which states do they flow through? Fill in this table.

River	Starts from	Ends at	States they flow through

1. Which is the longest of these rivers? Which is the shortest?

2. If they were of equal length, what would be their length?

(Hint: First add and then divide.)



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Mental Maths

A. Tick (✓) the correct option. ANS

1. The multiplication fact for $30 \div 15 = 2$ is

a. $2 \times 15 = 30$ b. $15 \div 30 = 2$ c. $30 \div 2 = 15$ d. $30 \times 15 = 2$

2. $88 \div 11$ is equal to

a. 8×0 b. 11×1 c. 88×1 d. 8×1

3. $44 \div 1$ is equal to

a. 4×11 b. 44×10 c. 2×44 d. 2×11

4. $0 \div 36$ is equal to ?

a. 0 b. 36 c. 1 d. 6

5. The product of two numbers is 28. One number is 7. To find the other number

a. divide 28 by 7 b. divide 28 by 4

c. multiply 28 by 4 d. multiply 28 by 7

B. Solve and compare using $>$, $<$ or $=$. ANS

1. $48 \div 1$ $48 + 48$

2. $35 \div 7$ $35 \div 5$

3. $64 \div 8$ $56 \div 7$

4. $700 \div 10$ $700 \div 100$

5. $0 \div 6$ $6 \div 6$

6. $350 \div 1$ $3500 \div 100$

C. Fill in the blanks. ANS

1. $145 \div 1 =$ _____

2. $168 \div$ _____ $= 168$

3. _____ $\div 1 = 425$

4. $848 \div 848 =$ _____

5. $222 \div$ _____ $= 1$

6. _____ $\div 19 = 1$

D. Find the quotient and remainder without doing long division. ANS

1. $42 \div 10$ Q R

2. $99 \div 10$ Q R

3. $3183 \div 100$ _____ _____

4. $4052 \div 100$ _____ _____

5. $13502 \div 1000$ _____ _____

6. $41079 \div 1000$ _____ _____



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Worksheet

A. Tick (✓) the correct option. **ANS**

- Pammi bought 28,028 oranges. She put them in packs of 28. How many packs did she make?
 a. 101 b. 11 c. 1001 d. 111
- Pawan reads 9 pages of a book in a day. If the book has 684 pages, find the number of days Pawan will take to read the book.
 a. 69 days b. 65 days c. 76 days d. 56 days

B. Fill in the **ANS**

$$\begin{array}{r}
 2 \\
 4 \overline{) 958} \\
 \underline{- 8} \\
 1 \\
 \underline{- 12} \\
 8 \\
 \underline{- 8} \\
 0
 \end{array}$$

$$\begin{array}{r}
 1 \\
 7 \overline{) 926} \\
 \underline{- 7} \\
 2 \\
 \underline{- 22} \\
 0 \\
 \underline{- 0} \\
 0
 \end{array}$$

$$\begin{array}{r}
 9 3 \\
 9 \overline{) 8941} \\
 \underline{- 8} \\
 9 \\
 \underline{- 9} \\
 0 \\
 \underline{- 0} \\
 1 \\
 \underline{- 1} \\
 0
 \end{array}$$

C. Solve these story sums. **ANS**

- For a function, 8,410 chairs are to be arranged equally in 12 rows. How many chairs will be left over?
- Angad had 731 stamps. He gave 143 of them to his sister Meher and put the rest equally into 14 bags. How many stamps did he put in each bag?
- The cost of 42 notebooks is ₹966. What is the cost of 1 notebook?



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A shopkeeper bought 9 boxes of apples, each containing 50 packets. If he repacked them into boxes containing 6 packets each, how many boxes would he get? **ANS**



HOTS
Questions