"Education is a matter of life and death for Pakistan. The world is progressing so rapidly that without requisite advance in education, not only shall we be left behind others but may be wiped out altogether."

(September 26, 1947, Karachi)

Quaid-e-Azam
Muhammad Ali Jinnah
Founder of Pakistan

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MATHEMATICS
for
Class 3

PUNJAB CURRICULUM AND TEXTBOOK BOARD, LAHORE
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- 1 block = 1 one

Group of 10 blocks = 1 ten

How many tens and ones are in 53?

53

5 tens
3 ones

There are 5 tens. They represent 50 blocks.
There are 3 ones. They represent 3 blocks.

53 = 5 tens 3 ones
53 = 50 + 3
Count the blocks. Write tens and ones.

<table>
<thead>
<tr>
<th>Blocks</th>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Blocks" /></td>
<td></td>
<td><img src="image" alt="Blocks" /></td>
</tr>
</tbody>
</table>

Write the number of tens and ones.

42 = ___ tens ___ ones
84 = ___ tens ___ ones
30 = ___ tens ___ ones
35 = ___ tens ___ ones

Write tens and ones.

63 = ___ + ___
21 = ___ + ___
78 = ___ + ___
57 = ___ + ___
84 = ___ + ___
Look at this example.

4 tens 7 ones

\[47\]

4 tens 7 ones = 47

Read tens and ones. Write the number.

5 tens 3 ones = 53

6 tens 2 ones = ___

7 tens 4 ones = ___

4 tens 9 ones = ___

8 tens 5 ones = ___

2 tens 7 ones = ___
10 tens joined together make a hundred.

How many hundreds, tens and ones are in 146?

146

1 hundred 4 tens 6 ones

There is 1 hundred, 4 tens and 6 ones in 146.

146 = 1 hundred 4 tens and 6 ones
Write the number of hundreds, tens and ones.

186 = 1 hundred 8 tens 6 ones

519 = ___ hundreds ___ tens ___ ones

365 = ___ hundreds ___ tens ___ ones

430 = ___ hundreds ___ tens ___ ones

Count and write hundreds, tens and ones.
How many hundreds, tens and ones are in 159?

159

1 hundred 5 tens 9 ones

There is 1 hundred, 5 tens and 9 ones in 159.

\[159 = 100 + 50 + 9\]

Write separately hundreds, tens and ones.

\[
\begin{align*}
348 &= \underline{300} + \underline{40} + \underline{8} \\
491 &= \underline{400} + \underline{90} + \underline{1} \\
582 &= \underline{500} + \underline{80} + \underline{2} \\
197 &= \underline{100} + \underline{90} + \underline{7} \\
395 &= \underline{300} + \underline{90} + \underline{5} \\
485 &= \underline{400} + \underline{80} + \underline{5}
\end{align*}
\]
Ali has 3 coins. The number on the coin shows its face value.

- One
- Ten
- Hundred

Look at this example.

- 1 hundred
- 2 tens
- 5 ones

1 hundred + 2 tens + 5 ones = 125

Count hundreds, tens and ones. Write the number.

<table>
<thead>
<tr>
<th>Hundreds</th>
<th>Tens</th>
<th>Ones</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>100</td>
<td>1</td>
<td>321</td>
</tr>
<tr>
<td>100</td>
<td>10</td>
<td>1</td>
<td>321</td>
</tr>
<tr>
<td>100</td>
<td>10</td>
<td>1</td>
<td>321</td>
</tr>
</tbody>
</table>

7
Ali has 10 coins of one hundred each.

$$100 = 1 \text{ hundred}$$

Group of 10 hundreds = 1 thousand

2349 = 2 thousands 3 hundreds 4 tens 9 ones

Write the number of thousands, hundreds, tens and ones.

<table>
<thead>
<tr>
<th>Thousands</th>
<th>Hundreds</th>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>2917</td>
<td>2</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>4625</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5834</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6831</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8743</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1 thousand 3 hundreds 4 tens 6 ones = 1346

Read thousands, hundreds, tens and ones. Write the number.

2 thousands 5 hundreds 7 tens 9 ones = 2579

3 thousands 6 hundreds 5 tens 2 ones =    

5 thousands 7 hundreds 8 tens 1 one =    

4 thousands 9 hundreds 2 tens 3 ones =    

6 thousands 2 hundreds 3 tens 9 ones =    

5 thousands 4 hundreds 2 tens 8 ones =    
Look at the coins and write the number.

<table>
<thead>
<tr>
<th>Thousands</th>
<th>Hundreds</th>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000</td>
<td>100</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>1000</td>
<td>100</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>1000</td>
<td>100</td>
<td>10</td>
<td>1</td>
</tr>
</tbody>
</table>

The number is ________.

<table>
<thead>
<tr>
<th>Thousands</th>
<th>Hundreds</th>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000</td>
<td>100</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>1000</td>
<td>100</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>1000</td>
<td>100</td>
<td>10</td>
<td>1</td>
</tr>
</tbody>
</table>

The number is ________.

<table>
<thead>
<tr>
<th>Thousands</th>
<th>Hundreds</th>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000</td>
<td>100</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>1000</td>
<td>100</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>1000</td>
<td>100</td>
<td>10</td>
<td>1</td>
</tr>
</tbody>
</table>

The number is ________.
Sana has 10 coins of one thousand each.

\[
\begin{array}{l}
1000 = 1000 \\
\text{Group of 10 thousands} = 10,000 \\
\end{array}
\]

13 475

1 = Ten thousand
3 = Thousands
4 = Hundreds
7 = Tens
5 = Ones

Look at the number and complete the table.

<table>
<thead>
<tr>
<th>Ten thousands</th>
<th>Thousands</th>
<th>Hundreds</th>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>14,357</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21,795</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45,678</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19,276</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Remember how many tens make a hundred?

10 tens = 1 hundred

How many thousands make a hundred thousand?

10 ten thousands = 1 hundred thousand

125, 386

1 = Hundred thousand
2 = Ten thousands
5 = Thousands
3 = Hundreds
8 = Tens
6 = Ones

Look at this number and fill in the blanks.

573, 942

Hundred thousands =

Ten thousands =

Thousands =

Hundreds =

Tens =

Ones =

12
We use place value to read and write numbers in words.

<table>
<thead>
<tr>
<th>Number</th>
<th>Written Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>8,931</td>
<td>Eight thousand, nine hundred and thirty one.</td>
</tr>
<tr>
<td>21,573</td>
<td>Twenty one thousand, five hundred and seventy three.</td>
</tr>
<tr>
<td>138,801</td>
<td>One hundred and thirty eight thousand, eight hundred and one.</td>
</tr>
</tbody>
</table>

Read the number and write the word.

10,583

4,192

120,367

908,561

13,741

2,642
Comparing numbers

Encircle the box with the greater number of objects.

- Apples: 5 apples
- Marbles: 6 marbles
- Eggs: 2 eggs, 3 eggs
- Bears: 2 bears
- Limes: 7 limes, 5 limes
Which box has more sweets?

The box on the left has more sweets.

We can show this as:

\[ \square > \square \]

greater than >
less than <

The > sign has an open side and a close side.

open side  \( \square > \) close side

The open side faces the box that has more objects.
The close side faces the box that has lesser objects.

Let's look at another example.

\[ \square \square \square \square < \square \square \square \square \]
Which box has lesser sweets?

The box on the left has lesser sweets.

We will put the sign as:

\[
\begin{array}{c}
\text{closed side} \\
\end{array}
\]

Which box has greater number of stars?

Both boxes have 4 stars.

We use = sign when both sides have equal objects.
Let's look at a few examples.

Remember:
open side ▶
closed side ◀
equal =

1. 
2. 
3. 
4.
Compare the objects and write the correct sign in the middle.

Remember:
- open side \( \rightarrow \)
- closed side \( \leftarrow \)
- equal \( = \)
Which is the bigger number?

5  8

8 is bigger than 5. We can show this as:

8  >  5

The open side faces 8.

Which is the smaller number?

3  7

3 is smaller than 7. We can show this as:

3  <  7

The closed side faces 3.

Which is the smaller number?

6  6

There is no smaller number. Both numbers are equal

6  =  6

We use = sign for equal numbers.
Compare the numbers and write the correct sign in the middle.

>  =  <

6  3

8  9

1  7

4  4

3  5

5  6

7  4

2  6

8  1

6  6

8  3

2  0

5  7

9  2

3  4

4  1

7  7

3  1

5  8

7  3

3  2
Which is the bigger number?

28 is bigger than 25. We can show this as:

\[
\begin{align*}
28 & \quad > \quad 15 \\
\text{open side} & \\
\end{align*}
\]

Which is the smaller number?

13 is smaller than 47. We can show this as:

\[
\begin{align*}
13 & \quad < \quad 47 \\
\text{closed side} & \\
\end{align*}
\]

Which is the smaller number?

There is no smaller number. Both numbers are equal.

\[
56 = 56
\]

We use the sign for equal numbers.
Compare the numbers and write the correct sign in the middle.

<table>
<thead>
<tr>
<th></th>
<th>&gt;</th>
<th>=</th>
<th>&lt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>45</td>
<td>&lt;</td>
<td>63</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td></td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>51</td>
<td></td>
<td>85</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td></td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>75</td>
<td></td>
<td>91</td>
<td></td>
</tr>
<tr>
<td>97</td>
<td></td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td></td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>86</td>
<td></td>
<td>59</td>
<td></td>
</tr>
<tr>
<td>43</td>
<td></td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>72</td>
<td></td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td></td>
<td>53</td>
<td></td>
</tr>
<tr>
<td>97</td>
<td></td>
<td>97</td>
<td></td>
</tr>
<tr>
<td>98</td>
<td></td>
<td>47</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td></td>
<td>62</td>
<td></td>
</tr>
<tr>
<td>79</td>
<td></td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td></td>
<td>52</td>
<td></td>
</tr>
<tr>
<td>63</td>
<td></td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>37</td>
<td></td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td></td>
<td>68</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td></td>
<td>16</td>
<td></td>
</tr>
</tbody>
</table>
Which is the bigger number?

328  160

328 is bigger than 160. We can show this as:

\[ 328 \geq 160 \]

The open side faces 328.

Which is the smaller number?

430  597

430 is smaller than 597. We can show this as:

\[ 430 \leq 597 \]

The closed side faces 430.

Which is the smaller number?

250  250

There is no smaller number. Both numbers are equal.

\[ 250 = 250 \]

We use = sign for equal numbers.
Compare the numbers and write the correct sign in the middle.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>112</td>
<td>&lt;</td>
<td>680</td>
<td></td>
</tr>
<tr>
<td>550</td>
<td>=</td>
<td>286</td>
<td></td>
</tr>
<tr>
<td>312</td>
<td>&lt;</td>
<td>317</td>
<td></td>
</tr>
<tr>
<td>583</td>
<td>=</td>
<td>583</td>
<td></td>
</tr>
<tr>
<td>740</td>
<td>&lt;</td>
<td>728</td>
<td></td>
</tr>
<tr>
<td>394</td>
<td>&lt;</td>
<td>971</td>
<td></td>
</tr>
<tr>
<td>680</td>
<td>=</td>
<td>870</td>
<td></td>
</tr>
<tr>
<td>800</td>
<td>&lt;</td>
<td>900</td>
<td></td>
</tr>
<tr>
<td>130</td>
<td>=</td>
<td>481</td>
<td></td>
</tr>
<tr>
<td>597</td>
<td>=</td>
<td>338</td>
<td></td>
</tr>
<tr>
<td>210</td>
<td>=</td>
<td>210</td>
<td></td>
</tr>
<tr>
<td>483</td>
<td>=</td>
<td>971</td>
<td></td>
</tr>
<tr>
<td>682</td>
<td>&lt;</td>
<td>890</td>
<td></td>
</tr>
<tr>
<td>302</td>
<td>&lt;</td>
<td>308</td>
<td></td>
</tr>
<tr>
<td>597</td>
<td>=</td>
<td>524</td>
<td></td>
</tr>
<tr>
<td>378</td>
<td>=</td>
<td>709</td>
<td></td>
</tr>
<tr>
<td>542</td>
<td>&lt;</td>
<td>410</td>
<td></td>
</tr>
<tr>
<td>260</td>
<td>&lt;</td>
<td>800</td>
<td></td>
</tr>
<tr>
<td>456</td>
<td>=</td>
<td>456</td>
<td></td>
</tr>
<tr>
<td>632</td>
<td>&lt;</td>
<td>794</td>
<td></td>
</tr>
<tr>
<td>870</td>
<td>&lt;</td>
<td>835</td>
<td></td>
</tr>
</tbody>
</table>
Ascending and Descending Order

Look at these numbers.

43  65  81  92

Which is the smallest number?

43  65  81  92

Which is the biggest number?

43  65  81  92

The smallest number is written first.
The biggest number is written at the end.

We say that the numbers have been arranged from the smallest to the biggest.

This is called arranging in ascending order.
Let's arrange these numbers in ascending order.

570  935  632  209

Step 1
Encircle the **smallest** number.

570  935  632  \(\boxed{209}\)

Step 2
Encircle the **biggest** number.

570  \(\boxed{935}\)  632  209

Step 3
Arrange the numbers in ascending order.

\[209 \quad 570 \quad 632 \quad 935\]

smallest \qquad \text{biggest}

Let's arrange these numbers in ascending order.

356  583  703  470

Step 1
Encircle the **smallest** number.

356  \(\boxed{583}\)  703  470

Step 2
Encircle the **biggest** number.

356  583  \(\boxed{703}\)  470

Step 3
Arrange the numbers in ascending order.

\[356 \quad 470 \quad 583 \quad 703\]

smallest \qquad \text{biggest}
Arrange the numbers in ascending order.

72  27  83  35

27  35  72  83

93  48  65  28

32  18  24  67

46  89  36  22

18  10  89  65

150  330  482  650

793  456  670  205

382  504  312  480

512  228  309  945

650  124  435  560
Look at these numbers.

92  78  35  24

Which is the **biggest** number?

92  78  35  24

Which is the **smallest** number?

92  78  35  24

The biggest number is written **first**.
The smallest number is written **at the end**.

We say that the numbers have been arranged from the biggest to the smallest.

This is called arranging in **descending order**.
Let’s arrange these numbers in descending order.

456 600 154 209

1. Encircle the **smallest** number.

456 600 (154) 209

2. Encircle the **biggest** number.

456 (600) 154 209

3. Arrange the numbers in descending order.

600 456 209 154

biggest          smallest

Let’s arrange these numbers in descending order.

850 963 208 452

1. Encircle the **smallest** number.

850 963 (208) 452

2. Encircle the **biggest** number.

850 (963) 208 452

3. Arrange the numbers in descending order.

963 850 452 208

biggest          smallest
Arrange the numbers in descending order.

83  20  75  49  _  _  _  _  _  _
65  44  28  35  _  _  _  _  _  _
56  12  90  35  _  _  _  _  _  _
42  18  67  12  _  _  _  _  _  _
13  45  58  60  _  _  _  _  _  _
200  315  680  798  _  _  _  _  _  _
653  844  312  145  _  _  _  _  _  _
703  950  265  140  _  _  _  _  _  _
356  578  809  124  _  _  _  _  _  _
794  813  124  685  _  _  _  _  _  _
Even and odd numbers

Ali has 8 sweets. He shares them equally into 2 groups.

There are no sweets left. So, we can say that 8 is an even number.

A number is **even** if that number of objects can be shared **equally** into 2 groups without any left over.

Even numbers have 2, 4, 6, 8 or 0 in the ones place.
Sana has 9 sweets. She shares them equally into 2 groups.

There is 1 sweet left over. So, we can say that 9 is an **odd number**.

A number is **odd** if there is **1 left over** after sharing that number of objects equally into 2 groups.

Odd numbers have **1, 3, 5, 7 or 9** in the ones place.
Count the objects and tell whether they are even or odd.

<table>
<thead>
<tr>
<th>Apple</th>
<th>Even</th>
<th>Odd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cup</td>
<td>Even</td>
<td>Odd</td>
</tr>
<tr>
<td>Mango</td>
<td>Even</td>
<td>Odd</td>
</tr>
<tr>
<td>Ink</td>
<td>Even</td>
<td>Odd</td>
</tr>
<tr>
<td>Key</td>
<td>Even</td>
<td>Odd</td>
</tr>
</tbody>
</table>

Encircle the even numbers.

20  51  43  38  97
66  18  4   93  80

Encircle the odd numbers.

17  19  24  31  47
65  20  42  78  94
Addition

Find the sum of 23 and 16.

\[
\begin{array}{c c}
\text{Tens} & \text{Ones} \\
2 & 3 \\
+ & 1 6 \\
\hline \\
\end{array}
\]

Step 1:
Add ones

\[
\begin{array}{c c}
\text{Tens} & \text{Ones} \\
2 & 3 \\
+ & 1 6 \\
\hline \\
\end{array}
\]

\[
10 \quad 10
\]

\[
1 \quad 1 \quad 1
\]

9

Step 2:
Add tens

\[
\begin{array}{c c}
\text{Tens} & \text{Ones} \\
10 & 10 \\
+ & 1 6 \\
\hline \\
\end{array}
\]

\[
10
\]

\[
1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1
\]

3 9

The sum of 23 and 16 is 39.
Add the following numbers.

<table>
<thead>
<tr>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>+</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
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<table>
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<tr>
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<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>+</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>+</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>+</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
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<td></td>
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<table>
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<th>Ones</th>
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</tr>
<tr>
<td>+</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>4</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>1</td>
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<tr>
<td>+</td>
<td>3</td>
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<tr>
<td>1</td>
<td>3</td>
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<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tens</th>
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</thead>
<tbody>
<tr>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>+</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>+</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
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<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>+</td>
<td>3</td>
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<tr>
<td>3</td>
<td>3</td>
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<tr>
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<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>+</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>+</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>+</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Find the sum of 49 and 4.

\[
\begin{array}{c c c c c}
\text{Tens} & \text{Ones} \\
4 & 9 \\
+ & 4 \\
\hline \\
\end{array}
\]

**Step 1:**
Add ones

\[
\begin{array}{c c c c c}
\text{Tens} & \text{Ones} \\
1 & 4 & 9 \\
+ & 4 \\
\hline \\
13 & 3 \\
\end{array}
\]

13 ones = 1 ten 3 ones
We carry 1 ten to the tens side

**Step 2:**
Add tens

\[
\begin{array}{c c c c c}
\text{Tens} & \text{Ones} \\
1 & 4 & 9 \\
+ & 4 \\
\hline \\
5 & 3 \\
\end{array}
\]
Add the following numbers.

<table>
<thead>
<tr>
<th>Tens</th>
<th>Ones</th>
<th>Tens</th>
<th>Ones</th>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>4</td>
<td>1</td>
<td>6</td>
<td>3</td>
<td>4</td>
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<tr>
<td>4</td>
<td>2</td>
<td>1</td>
<td>6</td>
<td>7</td>
<td>5</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Find the sum of 35 and 19.

\[
\begin{array}{c}
| \text{Tens} | \text{Ones} \\
|-------|-------| \\
| 3 \quad | 5 \quad | \\
| + \quad | 1 \quad | 9 \\
\end{array}
\]

\[
\begin{array}{c}
\text{Step 1:} \\
\text{Add ones}
\end{array}
\]

\[
\begin{array}{c|c|c|c|}
| \text{Tens} | \text{Ones} | \\
|-------|-------| \\
| 1 \quad | 3 \quad | 5 \\
| + \quad | 1 \quad | 9 \\
\end{array}
\]

14 ones = 1 ten 4 ones
We carry 1 ten to the tens side.

\[
\begin{array}{c}
\text{Step 2:} \\
\text{Add tens}
\end{array}
\]

\[
\begin{array}{c|c|c|c|}
| \text{Tens} | \text{Ones} | \\
|-------|-------| \\
| 1 \quad | 3 \quad | 5 \\
| + \quad | 1 \quad | 9 \\
\end{array}
\]
Add the following numbers.

<table>
<thead>
<tr>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>+ 1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>+ 2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>+ 1</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>+ 2</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>+ 1</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
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<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>+ 2</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>+ 2</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>+ 2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>+ 1</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>+ 1</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>+ 1</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>+ 1</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Find the sum of 120 and 93.

**Step 1:**
Add ones

<table>
<thead>
<tr>
<th>H</th>
<th>T</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>+</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Step 2:**
Add tens

<table>
<thead>
<tr>
<th>H</th>
<th>T</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>+</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

11 tens = 1 hundred 1 ten. We carry 1 hundred to the hundreds side.

**Step 3:**
Add hundreds

<table>
<thead>
<tr>
<th>H</th>
<th>T</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>+</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>
Add these numbers. Remember that H stands for hundreds, T for tens and O for ones.

1. \[
\begin{array}{cccc}
H & T & O \\
2 & 4 & 5 \\
+ & 7 & 2 \\
\hline
\end{array}
\]

2. \[
\begin{array}{cccc}
H & T & O \\
6 & 8 & 5 \\
+ & 2 & 3 \\
\hline
\end{array}
\]

3. \[
\begin{array}{cccc}
H & T & O \\
3 & 6 & 4 \\
+ & 4 & 3 \\
\hline
\end{array}
\]

4. \[
\begin{array}{cccc}
H & T & O \\
3 & 1 & 8 \\
+ & 5 & 3 \\
\hline
\end{array}
\]

5. \[
\begin{array}{cccc}
H & T & O \\
4 & 0 & 9 \\
+ & 9 & 7 \\
\hline
\end{array}
\]

6. \[
\begin{array}{cccc}
H & T & O \\
5 & 1 & 8 \\
+ & 6 & 4 \\
\hline
\end{array}
\]

7. \[
\begin{array}{cccc}
H & T & O \\
6 & 1 & 8 \\
+ & 5 & 7 \\
\hline
\end{array}
\]

8. \[
\begin{array}{cccc}
H & T & O \\
8 & 5 & 3 \\
+ & 7 & 1 \\
\hline
\end{array}
\]

9. \[
\begin{array}{cccc}
H & T & O \\
6 & 7 & 3 \\
+ & 7 & 9 \\
\hline
\end{array}
\]

10. \[
\begin{array}{cccc}
H & T & O \\
4 & 2 & 0 \\
+ & 8 & 9 \\
\hline
\end{array}
\]

11. \[
\begin{array}{cccc}
H & T & O \\
9 & 2 & 3 \\
+ & 4 & 8 \\
\hline
\end{array}
\]

12. \[
\begin{array}{cccc}
H & T & O \\
5 & 4 & 0 \\
+ & 6 & 8 \\
\hline
\end{array}
\]
Find the sum of 257 and 364.

Step 1:
Add ones

\[
\begin{array}{ccc}
\text{H} & \text{T} & \text{O} \\
2 & 15 & 7 \\
+ & 3 & 64 \\
\hline
\end{array}
\]

7 + 4 = 11
11 ones = 1 ten 1 one
We carry 1 ten to the tens side.

\[
\begin{array}{ccc}
\text{H} & \text{T} & \text{O} \\
12 & 15 & 7 \\
+ & 3 & 64 \\
\hline
\end{array}
\]

Step 2:
Add tens

\[
\begin{array}{ccc}
\text{H} & \text{T} & \text{O} \\
12 & 15 & 7 \\
+ & 3 & 64 \\
\hline
\end{array}
\]

5 + 6 + 1 = 12
12 tens = 1 hundred 2 tens
We carry 1 hundred to the hundreds side.

Step 3:
Add hundreds

\[
\begin{array}{ccc}
\text{H} & \text{T} & \text{O} \\
12 & 15 & 7 \\
+ & 3 & 64 \\
\hline
\end{array}
\]

\[
\begin{array}{ccc}
\text{H} & \text{T} & \text{O} \\
12 & 15 & 7 \\
+ & 3 & 64 \\
\hline
6 & 2 & 1 \\
\end{array}
\]
Add the following numbers.

\[
\begin{array}{ccc}
H & T & O \\
3 & 7 & 5 \\
+ & 4 & 5 & 2 \\
\hline
\end{array}
\quad
\begin{array}{ccc}
H & T & O \\
4 & 9 & 3 \\
+ & 1 & 8 & 4 \\
\hline
\end{array}
\quad
\begin{array}{ccc}
H & T & O \\
2 & 8 & 5 \\
+ & 3 & 5 & 2 \\
\hline
\end{array}
\]

\[
\begin{array}{ccc}
H & T & O \\
8 & 6 & 2 \\
+ & 1 & 3 & 6 \\
\hline
\end{array}
\quad
\begin{array}{ccc}
H & T & O \\
2 & 9 & 5 \\
+ & 3 & 1 & 4 \\
\hline
\end{array}
\quad
\begin{array}{ccc}
H & T & O \\
6 & 9 & 5 \\
+ & 2 & 4 & 2 \\
\hline
\end{array}
\]

\[
\begin{array}{ccc}
H & T & O \\
3 & 6 & 1 \\
+ & 4 & 5 & 8 \\
\hline
\end{array}
\quad
\begin{array}{ccc}
H & T & O \\
3 & 8 & 1 \\
+ & 3 & 9 & 6 \\
\hline
\end{array}
\quad
\begin{array}{ccc}
H & T & O \\
4 & 3 & 5 \\
+ & 2 & 7 & 8 \\
\hline
\end{array}
\]

\[
\begin{array}{ccc}
H & T & O \\
6 & 9 & 7 \\
+ & 1 & 2 & 6 \\
\hline
\end{array}
\quad
\begin{array}{ccc}
H & T & O \\
3 & 6 & 4 \\
+ & 2 & 5 & 8 \\
\hline
\end{array}
\quad
\begin{array}{ccc}
H & T & O \\
3 & 9 & 8 \\
+ & 4 & 1 & 5 \\
\hline
\end{array}
\]
Find the sum of 1023 and 1564.

Step 1:
Add ones

\[
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
1 & 0 & 2 & 3 \\
+ & 1 & 5 & 6 \\
\hline
& & & 7
\end{array}
\]

Step 2:
Add tens

\[
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
1 & 0 & 2 & 3 \\
+ & 1 & 5 & 6 \\
\hline
& & & 8 7
\end{array}
\]

Step 3:
Add hundreds

\[
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
1 & 0 & 2 & 3 \\
+ & 1 & 5 & 6 \\
\hline
& & & 5 8 7
\end{array}
\]

Step 4:
Add thousands

\[
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
1 & 0 & 2 & 3 \\
+ & 1 & 5 & 6 \\
\hline
& & & 2 5 8 7
\end{array}
\]

44
Add the following numbers. We can write Th for thousands, H for hundreds, T for tens, O for ones.

\[
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
1 & 2 & 8 & 3 \\
+ & 2 & 5 & 1 & 3 \\
\hline
\end{array}
\quad
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
5 & 4 & 7 & 1 \\
+ & 4 & 3 & 2 & 5 \\
\hline
\end{array}
\]

\[
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
3 & 0 & 5 & 7 \\
+ & 2 & 8 & 3 & 1 \\
\hline
\end{array}
\quad
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
8 & 6 & 9 & 0 \\
+ & 1 & 3 & 0 & 7 \\
\hline
\end{array}
\]

\[
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
5 & 8 & 4 & 6 \\
+ & 1 & 1 & 3 & 2 \\
\hline
\end{array}
\quad
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
4 & 3 & 1 & 0 \\
+ & 3 & 6 & 8 & 5 \\
\hline
\end{array}
\]

\[
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
4 & 5 & 3 & 1 \\
+ & 2 & 3 & 4 & 9 \\
\hline
\end{array}
\quad
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
6 & 1 & 5 & 4 \\
+ & 2 & 4 & 3 & 0 \\
\hline
\end{array}
\]

\[
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
3 & 1 & 9 & 3 \\
+ & 1 & 5 & 6 & 4 \\
\hline
\end{array}
\quad
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
2 & 7 & 4 & 6 \\
+ & 1 & 5 & 6 & 4 \\
\hline
\end{array}
\]
Find the sum of 1253 and 4936.

Step 1:
Add ones

<table>
<thead>
<tr>
<th>Th</th>
<th>H</th>
<th>T</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>+</td>
<td>4</td>
<td>9</td>
<td>3</td>
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<tr>
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</tbody>
</table>

Step 2:
Add tens

<table>
<thead>
<tr>
<th>Th</th>
<th>H</th>
<th>T</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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</tr>
<tr>
<td>+</td>
<td>4</td>
<td>9</td>
<td>3</td>
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<td>8</td>
<td>9</td>
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<td></td>
</tr>
</tbody>
</table>

Step 3:
Add hundreds

11 hundreds = 1 thousand
1 hundred
We will carry 1 thousand to the thousands side.

<table>
<thead>
<tr>
<th>Th</th>
<th>H</th>
<th>T</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>+</td>
<td>4</td>
<td>9</td>
<td>3</td>
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<tr>
<td>1</td>
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<td>9</td>
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</tbody>
</table>

Step 4:
Add thousands

<table>
<thead>
<tr>
<th>Th</th>
<th>H</th>
<th>T</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>+</td>
<td>4</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>8</td>
<td>9</td>
</tr>
</tbody>
</table>
Add the following numbers. Remember that Th stands for thousands, H for hundreds, T for tens, O for ones.

\[
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
3 & 8 & 2 & 5 \\
+ & 2 & 5 & 6 \\
\hline
\end{array}
\quad
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
5 & 7 & 3 & 1 \\
+ & 1 & 5 & 6 \\
\hline
\end{array}
\]

\[
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
2 & 4 & 6 & 9 \\
+ & 5 & 3 & 2 \\
\hline
\end{array}
\quad
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
3 & 8 & 5 & 2 \\
+ & 1 & 3 & 4 \\
\hline
\end{array}
\]

\[
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
2 & 8 & 7 & 6 \\
+ & 4 & 3 & 5 \\
\hline
\end{array}
\quad
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
5 & 8 & 3 & 1 \\
+ & 2 & 7 & 0 \\
\hline
\end{array}
\]

\[
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
7 & 6 & 0 & 3 \\
+ & 1 & 2 & 6 \\
\hline
\end{array}
\quad
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
2 & 9 & 6 & 5 \\
+ & 3 & 7 & 5 \\
\hline
\end{array}
\]

\[
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
4 & 3 & 1 & 5 \\
+ & 1 & 5 & 6 \\
\hline
\end{array}
\quad
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
1 & 9 & 7 & 3 \\
+ & 2 & 5 & 2 \\
\hline
\end{array}
\]
Addition problems in daily life

There are 20 apples and 30 mangoes on Ahmed’s cart. How many fruits are there altogether?

\[
\begin{array}{c}
20 \\
+ 30 \\
\hline
50
\end{array}
\]

There are 50 fruits altogether.

Sana had 427 beads. Her mother gave her another 258 beads. How many beads did Sana have altogether?

\[
\begin{array}{c}
427 \\
+ 258 \\
\hline
685
\end{array}
\]

Sana had 685 beads altogether.
1. There are 29 boys and 13 girls in Class 3. How many students are there altogether?

2. Ahmed got 180 marks in his Math test and 215 marks in his English test. How many marks did he get altogether?

3. Pakistan scored 320 runs in a cricket match. India scored 285 runs. How many total runs were scored in the match?

4. Bashir sold 68 oranges on Monday and 103 oranges on Tuesday. How many oranges did he sell altogether?

5. Ali got Rs. 132 on Eid. Hamza got Rs. 95 on Eid. How much money did both Ali and Hamza get on Eid?
More about addition

Ali bought 3 red balloons and 2 blue balloons.
How many balloons does Ali have?
Ali has 5 balloons.

\[3 + 2 = 5\]

Sana bought 2 red balloons and 3 blue balloons.
How many balloons does Sana have?
Sana has 5 balloons.

\[2 + 3 = 5\]

We can write \[3 + 2\] or \[2 + 3\].
The answer remains 5.
How many fruits are there?

8 oranges and 1 apple = 1 orange and 8 apples
make 9. make 9.

How many sweets are there?

3 blue sweets and 4 pink sweets = 4 blue sweets and 3 pink sweets
make 7. make 7.

How many balls are there?

2 pink balls and 4 blue balls = 4 pink balls and 2 blue balls
make 6. make 6.
Fill in the blanks with the correct answer.

2 + 5 = ___ and 5 + 2 = ___

6 + 3 = ___ and 3 + 6 = ___

8 + 1 = ___ and 1 + 8 = ___

7 + 9 = ___ and 9 + 7 = ___

Fill in the blanks with the correct answer.

9 + 1 = ___ + 9

8 + 3 = 3 + ___

4 + 2 = 2 + ___

5 + 7 = ___ + 5

3 + 7 = ___ + 3

6 + 5 = ___ + 6
Mental addition

Find the sum of 12 and 26.

\[ 12 + 26 = ? \]

12 = 10 + 2
26 = 20 + 6

**Step 1**
Add the tens
10 + 20 = 30

**Step 2**
Add the ones
2 + 6 = 8

**Step 3**
Add both answers
30 + 8 = 38

12 + 26 = 38

Do mental math and add the following numbers.

15 + 10 =

18 + 11 =

26 + 13 =

9 + 10 =

32 + 12 =

30 + 16 =

17 + 21 =

24 + 5 =
Subtraction

Find the difference between 47 and 13.

<table>
<thead>
<tr>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>7</td>
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<tr>
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<td>1</td>
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<tr>
<td>3</td>
<td>4</td>
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</tbody>
</table>

**Step 1:** Subtract ones.

**Step 2:** Subtract tens.
Subtract the following numbers.

<table>
<thead>
<tr>
<th>Tens</th>
<th>Ones</th>
<th>Tens</th>
<th>Ones</th>
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<tbody>
<tr>
<td>4</td>
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</table>
Find the difference between 43 and 6.

Step 1:
Subtract ones

Step 2:
Subtract tens

We cannot subtract 6 from 3. We will borrow 1 ten from the tens side.
Subtract the following numbers.

<table>
<thead>
<tr>
<th>Tens</th>
<th>Ones</th>
<th>Tens</th>
<th>Ones</th>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
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</tr>
</tbody>
</table>
Find the difference between 75 and 28.

Step 1: Subtract ones.

\[
\begin{array}{c|c}
\text{Tens} & \text{Ones} \\
\hline
7 & 5 \\
- 2 & 8 \\
\hline
\end{array}
\]

Step 2: Subtract tens.

\[
\begin{array}{c|c}
\text{Tens} & \text{Ones} \\
\hline
67 & 15 \\
- 28 & \\
\hline
47 &
\end{array}
\]

Subtract the following numbers.

```
Tens Ones  | Tens Ones  | Tens Ones  
5  7      | 4  3      | 8  1      
- 2  9    | - 2  6    | - 5  3    

Tens Ones  | Tens Ones  | Tens Ones  
6  2      | 3  5      | 7  2      
- 2  7    | - 1  7    | - 4  8    

Tens Ones  | Tens Ones  | Tens Ones  
9  1      | 6  8      | 6  2      
- 4  3    | - 1  9    | - 3  7    

Tens Ones  | Tens Ones  | Tens Ones  
8  4      | 7  1      | 9  3      
- 2  7    | - 4  5    | - 2  6    
```
Find the difference between 285 and 162.

**Step 1:** Subtract ones.

<table>
<thead>
<tr>
<th>Hundreds</th>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>0</td>
<td>100</td>
</tr>
</tbody>
</table>

\[
\begin{array}{c}
H & T & O \\
2 & 8 & 5 \\
- & 1 & 6 & 2 \\
= & 1 & 2 & 3 \\
\end{array}
\]

**Step 2:** Subtract tens.

<table>
<thead>
<tr>
<th>Hundreds</th>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>100</td>
<td>10</td>
</tr>
</tbody>
</table>

\[
\begin{array}{c}
H & T & O \\
2 & 8 & 5 \\
- & 1 & 6 & 2 \\
= & 1 & 2 & 3 \\
\end{array}
\]

**Step 3:** Subtract hundreds.

<table>
<thead>
<tr>
<th>Hundreds</th>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>10</td>
<td>1</td>
</tr>
</tbody>
</table>

\[
\begin{array}{c}
H & T & O \\
2 & 8 & 5 \\
- & 1 & 6 & 2 \\
= & 1 & 2 & 3 \\
\end{array}
\]
Subtract the following numbers. Remember that H stands for hundreds, T for tens and O for ones.

```
HTO  
645  
-321  
-----

HTO  
834  
-512  
-----

HTO  
487  
-162  
-----

HTO  
754  
-321  
-----

HTO  
563  
-210  
-----

HTO  
947  
-536  
-----

HTO  
849  
-416  
-----

HTO  
365  
-142  
-----

HTO  
784  
-251  
-----

HTO  
569  
-247  
-----

HTO  
385  
-152  
-----

HTO  
695  
-273  
-----
```
Find the difference between 292 and 65.

```
  H  T  O
2 9 2
- 6 5
    7
```

**Step 1:** Subtract ones.

```
  H  T  O
2 9 2
- 6 5
    7
```

We cannot subtract 5 from 2. We will borrow 1 ten from the tens side.

**Step 2:** Subtract tens.

```
  H  T  O
2 8 1 2
- 6 5
  2 7
```

We are left with 8 tens, so we will subtract 6 from 8.

**Step 3:** Subtract hundreds.

```
  H  T  O
2 8 1 2
- 6 5
  2 2 7
```
Subtract the following numbers. Remember that H stands for hundreds, T for tens and O for ones.

\[
\begin{array}{ccc}
H & T & O \\
1 & 6 & 3 \\
- & 8 & 1 \\
\hline
H & T & O \\
1 & 8 & 5 \\
- & 4 & 7 \\
\hline
H & T & O \\
3 & 9 & 1 \\
- & 5 & 6 \\
\hline
H & T & O \\
5 & 1 & 7 \\
- & 8 & 5 \\
\hline
H & T & O \\
6 & 5 & 3 \\
- & 2 & 8 \\
\hline
H & T & O \\
8 & 3 & 1 \\
- & 7 & 8 \\
\hline
H & T & O \\
7 & 6 & 5 \\
- & 8 & 6 \\
\hline
H & T & O \\
3 & 4 & 0 \\
- & 5 & 9 \\
\hline
H & T & O \\
5 & 7 & 8 \\
- & 9 & 3 \\
\hline
H & T & O \\
4 & 6 & 1 \\
- & 3 & 5 \\
\hline
H & T & O \\
8 & 3 & 6 \\
- & 1 & 7 \\
\hline
H & T & O \\
5 & 0 & 1 \\
- & 1 & 4 \\
\hline
H & T & O \\
5 & 3 & 2 \\
- & 1 & 4 \\
\hline
H & T & O \\
6 & 5 & 0 \\
- & 6 & 5 \\
\hline
H & T & O \\
4 & 0 & 9 \\
- & 6 & 5 \\
\hline
\end{array}
\]
Find the difference between 312 and 158.

**Step 1:** Subtract ones

\[
\begin{array}{c|c|c}
H & T & O \\
3 & 1 & 2 \\
- & 1 & 5 & 8 \\
\hline
\end{array}
\]

We cannot subtract 8 from 2. We will borrow 1 ten from the tens side.

**Step 2:** Subtract tens

\[
\begin{array}{c|c|c|c}
H & T & O \\
2 & 3 & 1 & 2 \\
- & 1 & 5 & 8 \\
\hline
\end{array}
\]

We are left with 0 tens. We will borrow 1 hundred from the hundreds side.

**Step 3:** Subtract hundreds

\[
\begin{array}{c|c|c|c}
H & T & O \\
2 & 3 & 1 & 2 \\
- & 1 & 5 & 8 \\
\hline
1 & 5 & 4 
\end{array}
\]

We are left with 2 hundreds so we will subtract 1 from 2.
Subtract the following numbers.

\[
\begin{array}{ccc}
\text{HTO} & \text{HTO} & \text{HTO} \\
3 & 8 & 1 \\
\underline{-} & 1 & 9 & 7 \\
\hline
\end{array}
\begin{array}{ccc}
\text{HTO} & \text{HTO} & \text{HTO} \\
4 & 6 & 4 \\
\underline{-} & 3 & 5 & 2 \\
\hline
\end{array}
\begin{array}{ccc}
\text{HTO} & \text{HTO} & \text{HTO} \\
3 & 1 & 7 \\
\underline{-} & 1 & 6 & 3 \\
\hline
\end{array}
\begin{array}{ccc}
\text{HTO} & \text{HTO} & \text{HTO} \\
4 & 7 & 8 \\
\underline{-} & 2 & 9 & 5 \\
\hline
\end{array}
\begin{array}{ccc}
\text{HTO} & \text{HTO} & \text{HTO} \\
5 & 6 & 3 \\
\underline{-} & 1 & 8 & 6 \\
\hline
\end{array}
\begin{array}{ccc}
\text{HTO} & \text{HTO} & \text{HTO} \\
3 & 0 & 7 \\
\underline{-} & 1 & 5 & 5 \\
\hline
\end{array}
\begin{array}{ccc}
\text{HTO} & \text{HTO} & \text{HTO} \\
8 & 0 & 5 \\
\underline{-} & 2 & 3 & 4 \\
\hline
\end{array}
\begin{array}{ccc}
\text{HTO} & \text{HTO} & \text{HTO} \\
4 & 3 & 7 \\
\underline{-} & 1 & 6 & 5 \\
\hline
\end{array}
\begin{array}{ccc}
\text{HTO} & \text{HTO} & \text{HTO} \\
8 & 6 & 5 \\
\underline{-} & 4 & 8 & 3 \\
\hline
\end{array}
\begin{array}{ccc}
\text{HTO} & \text{HTO} & \text{HTO} \\
4 & 0 & 0 \\
\underline{-} & 2 & 6 & 4 \\
\hline
\end{array}
\begin{array}{ccc}
\text{HTO} & \text{HTO} & \text{HTO} \\
2 & 1 & 5 \\
\underline{-} & 1 & 0 & 8 \\
\hline
\end{array}
\begin{array}{ccc}
\text{HTO} & \text{HTO} & \text{HTO} \\
8 & 0 & 9 \\
\underline{-} & 5 & 6 & 0 \\
\hline
\end{array}
\begin{array}{ccc}
\text{HTO} & \text{HTO} & \text{HTO} \\
7 & 8 & 0 \\
\underline{-} & 6 & 6 & 5 \\
\hline
\end{array}
\begin{array}{ccc}
\text{HTO} & \text{HTO} & \text{HTO} \\
8 & 1 & 5 \\
\underline{-} & 6 & 6 & 5 \\
\hline
\end{array}
\begin{array}{ccc}
\text{HTO} & \text{HTO} & \text{HTO} \\
7 & 3 & 0 \\
\underline{-} & 6 & 6 & 5 \\
\hline
\end{array}
\end{array}
Find the difference between 3784 and 2362.

Step 1:
Subtract ones.

\[
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
3 & 7 & 8 & 4 \\
- & 2 & 3 & 6 \\
\hline
& & & 2 \\
\end{array}
\]

Step 2:
Subtract tens.

\[
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
3 & 7 & 8 & 4 \\
- & 2 & 3 & 6 \\
\hline
& & & 22 \\
\end{array}
\]

Step 3:
Subtract hundreds.

\[
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
3 & 7 & 8 & 4 \\
- & 2 & 3 & 6 \\
\hline
& & & 422 \\
\end{array}
\]

Step 4:
Subtract thousands.

\[
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
3 & 7 & 8 & 4 \\
- & 2 & 3 & 6 \\
\hline
& & & 1422 \\
\end{array}
\]
Subtract the following numbers:

\[
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
5 & 3 & 2 & 4 \\
- & 3 & 1 & 1 \\
	ext{Th} & \text{H} & \text{T} & \text{O} \\
5 & 9 & 4 & 4 \\
- & 4 & 8 & 1 \\
\hline
\text{Th} & \text{H} & \text{T} & \text{O} \\
2 & 3 & 5 & 3 \\
- & 1 & 1 & 4 \\
\hline
\text{Th} & \text{H} & \text{T} & \text{O} \\
2 & 3 & 5 & 3 \\
- & 1 & 1 & 4 \\
\hline
\text{Th} & \text{H} & \text{T} & \text{O} \\
3 & 6 & 4 & 7 \\
- & 1 & 2 & 2 \\
\hline
\text{Th} & \text{H} & \text{T} & \text{O} \\
9 & 2 & 8 & 8 \\
- & 2 & 1 & 3 \\
\hline
\text{Th} & \text{H} & \text{T} & \text{O} \\
5 & 4 & 7 & 2 \\
- & 2 & 1 & 6 \\
\hline
\text{Th} & \text{H} & \text{T} & \text{O} \\
5 & 9 & 4 & 3 \\
- & 2 & 3 & 2 \\
\hline
\end{array}
\]
Find the difference between 4381 and 1658.

Step 1:
Subtract ones.

\[
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
4 & 3 & 7 & 8 \\
- & 1 & 6 & 5 \\
\end{array}
\]

We cannot subtract 8 from 1. We will borrow 1 ten from the tens side.

\[
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
4 & 3 & 7 & 8 \\
- & 1 & 6 & 5 \\
\end{array}
\]

\[
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
3 & 7 & 8 & 1 \\
- & 1 & 6 & 5 \\
\end{array}
\]

We are left with 7 tens. We will subtract 5 from 7.

Step 2:
Subtract tens.

\[
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
4 & 3 & 7 & 8 \\
- & 1 & 6 & 5 \\
\end{array}
\]

\[
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
4 & 3 & 1 & 1 \\
- & 1 & 6 & 5 \\
\end{array}
\]

We cannot subtract 6 hundreds from 3 hundreds. We will borrow 1 thousand.

Step 3:
Subtract hundreds.

\[
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
3 & 7 & 8 & 1 \\
- & 1 & 6 & 5 \\
\end{array}
\]

\[
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
3 & 7 & 2 & 3 \\
\end{array}
\]

Step 4:
Subtract thousands.

\[
\begin{array}{cccc}
\text{Th} & \text{H} & \text{T} & \text{O} \\
3 & 7 & 2 & 3 \\
\end{array}
\]

We are left with 3 thousands. We will subtract 1 thousand from 3 thousand.
Subtract the following numbers.

\[
\begin{array}{c c c c}
\text{Th} & \text{H} & \text{T} & \text{O} \\
5 & 3 & 2 & 2 \\
\hline
4 & 0 & 5 & 1 \\
\hline
\end{array}
\quad
\begin{array}{c c c c}
\text{Th} & \text{H} & \text{T} & \text{O} \\
4 & 2 & 4 & 2 \\
\hline
1 & 0 & 2 & 3 \\
\hline
\end{array}
\]

\[
\begin{array}{c c c c}
\text{Th} & \text{H} & \text{T} & \text{O} \\
9 & 2 & 5 & 3 \\
\hline
3 & 5 & 1 & 2 \\
\hline
\end{array}
\quad
\begin{array}{c c c c}
\text{Th} & \text{H} & \text{T} & \text{O} \\
5 & 5 & 5 & 4 \\
\hline
1 & 3 & 2 & 5 \\
\hline
\end{array}
\]

\[
\begin{array}{c c c c}
\text{Th} & \text{H} & \text{T} & \text{O} \\
9 & 5 & 3 & 1 \\
\hline
8 & 0 & 0 & 4 \\
\hline
\end{array}
\quad
\begin{array}{c c c c}
\text{Th} & \text{H} & \text{T} & \text{O} \\
5 & 1 & 3 & 7 \\
\hline
2 & 5 & 1 & 5 \\
\hline
\end{array}
\]

\[
\begin{array}{c c c c}
\text{Th} & \text{H} & \text{T} & \text{O} \\
7 & 8 & 1 & 3 \\
\hline
1 & 3 & 6 & 2 \\
\hline
\end{array}
\quad
\begin{array}{c c c c}
\text{Th} & \text{H} & \text{T} & \text{O} \\
7 & 4 & 2 & 2 \\
\hline
2 & 3 & 6 & 2 \\
\hline
\end{array}
\]

\[
\begin{array}{c c c c}
\text{Th} & \text{H} & \text{T} & \text{O} \\
5 & 4 & 3 & 8 \\
\hline
3 & 6 & 2 & 7 \\
\hline
\end{array}
\quad
\begin{array}{c c c c}
\text{Th} & \text{H} & \text{T} & \text{O} \\
6 & 8 & 6 & 9 \\
\hline
4 & 3 & 7 & 7 \\
\hline
\end{array}
\]
Subtraction in daily life

Abid has 16 goats in his farm. He sold 5 goats. How many goats were left on his farm?

Abid has 16 goats
He sold 5 goats.
Number of goats left

Abid has 11 goats left in his farm.

Sana had 148 sweets. She gave away 35 sweets to her friends. How many sweets were left?

Sana had 148 sweets
She gave away 35 sweets
Number of sweets left

There were 113 sweets left.
1 Ahmed had 15 biscuits. He ate 9 biscuits. How many biscuits were left?

2 There were 29 birds on a tree. 13 birds flew away. How many birds were left?

3 There were 43 apples on a tree. 12 apples fell down. How many apples were left on the tree?

4 Haris had 153 coins. He gave away 32 coins to his brother. How many coins were left with Haris?

5 Sana had 377 candles. She used 240 of them. How many candles were left with Sana?

6 There are 345 people in a hall. 132 go out. How many people are left inside the hall?

7 Irfan had 175 eggs. He sold 38 eggs. How many eggs were left?
Repeated Addition & Multiplication

Look at these examples.

\[
\begin{array}{c}
4 \\
+ \\
4 \\
= \\
8
\end{array}
\]

There are 2 groups.
Each group has 4 oranges.

\[
\begin{array}{c}
2 \\
+ \\
2 \\
+ \\
2 \\
= \\
6
\end{array}
\]

There are 3 groups.
Each group has 2 bananas.

\[
\begin{array}{c}
3 \\
+ \\
3 \\
+ \\
3 \\
+ \\
3 \\
= \\
12
\end{array}
\]

There are 4 groups.
Each group has 3 balls.
Count the total number of groups. Count the number of objects in each group. Write the total number.

There are _____ groups.

Each group has _____ eggs.

\[3 + 3 = ____\]

There are _____ groups.

Each group has _____ biscuits.

\[2 + 2 + 2 + 2 = ____\]

There are _____ groups.

Each group has _____ carrots.

\[4 + 4 + 4 = ____\]
**Multiplication**

How many rings are there altogether?

\[ 5 + 5 = 10 \]

There are 2 groups. Each group has 5 rings.

\[ 2 \times 5 = 10 \]

We say 2 times 5 equals 10.

\textbf{\textit{x} is read as \textit{times}. It means to \textit{multiply}.}

How many balls are there altogether?

\[ 6 + 6 + 6 = 18 \]

There are 3 groups. Each group has 6 balls.

\[ 3 \times 6 = 18 \]

We say 3 times 6 equals 18.
Multiply the numbers.

\[ 3 \times 5 = \]  
We say 3 times 5 equals ______.

\[ 2 \times 4 = \]  
We say 2 times 4 equals ______.

\[ 3 \times 7 = \]  
We say 3 times 7 equals ______.

\[ 2 \times 8 = \]  
We say 2 times 8 equals ______.
Let's quickly revise the tables we learned in Class 2.

<table>
<thead>
<tr>
<th></th>
<th>Table of 2</th>
<th>Table of 3</th>
<th>Table of 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x 2</td>
<td>2</td>
<td>1 x 3 = 3</td>
<td>1 x 4 = 4</td>
</tr>
<tr>
<td>2 x 2</td>
<td>4</td>
<td>2 x 3 = 6</td>
<td>2 x 4 = 8</td>
</tr>
<tr>
<td>3 x 2</td>
<td>6</td>
<td>3 x 3 = 9</td>
<td>3 x 4 = 12</td>
</tr>
<tr>
<td>4 x 2</td>
<td>8</td>
<td>4 x 3 = 12</td>
<td>4 x 4 = 16</td>
</tr>
<tr>
<td>5 x 2</td>
<td>10</td>
<td>5 x 3 = 15</td>
<td>5 x 4 = 20</td>
</tr>
<tr>
<td>6 x 2</td>
<td>12</td>
<td>6 x 3 = 18</td>
<td>6 x 4 = 24</td>
</tr>
<tr>
<td>7 x 2</td>
<td>14</td>
<td>7 x 3 = 21</td>
<td>7 x 4 = 28</td>
</tr>
<tr>
<td>8 x 2</td>
<td>16</td>
<td>8 x 3 = 24</td>
<td>8 x 4 = 32</td>
</tr>
<tr>
<td>9 x 2</td>
<td>18</td>
<td>9 x 3 = 27</td>
<td>9 x 4 = 36</td>
</tr>
<tr>
<td>10 x 2</td>
<td>20</td>
<td>10 x 3 = 30</td>
<td>10 x 4 = 40</td>
</tr>
</tbody>
</table>
Read the table of 2 and write the answer.

\[ 2 \times 2 = \_ \_ \_ \_ \]
\[ 3 \times 2 = \_ \_ \_ \_ \]
\[ 6 \times 2 = \_ \_ \_ \_ \]
\[ 9 \times 2 = \_ \_ \_ \_ \]
\[ 1 \times 2 = \_ \_ \_ \_ \]
\[ 5 \times 2 = \_ \_ \_ \_ \]

Complete the table of 3.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>3</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

How many triangles are there altogether?

\[ 4 \times \_ \_ \_ \_ = \_ \_ \_ \_ \]

4 times \_ \_ \_ \_ equals \_ \_ \_ \_
There are \_ \_ \_ \_ triangles altogether.

Complete the table of 4.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>4</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Let's revise the tables of 5 and 10.

<table>
<thead>
<tr>
<th>Table of 5</th>
<th>Table of 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 × 5 = 5</td>
<td>1 × 10 = 10</td>
</tr>
<tr>
<td>2 × 5 = 10</td>
<td>2 × 10 = 20</td>
</tr>
<tr>
<td>3 × 5 = 15</td>
<td>3 × 10 = 30</td>
</tr>
<tr>
<td>4 × 5 = 20</td>
<td>4 × 10 = 40</td>
</tr>
<tr>
<td>5 × 5 = 25</td>
<td>5 × 10 = 50</td>
</tr>
<tr>
<td>6 × 5 = 30</td>
<td>6 × 10 = 60</td>
</tr>
<tr>
<td>7 × 5 = 35</td>
<td>7 × 10 = 70</td>
</tr>
<tr>
<td>8 × 5 = 40</td>
<td>8 × 10 = 80</td>
</tr>
<tr>
<td>9 × 5 = 45</td>
<td>9 × 10 = 90</td>
</tr>
<tr>
<td>10 × 5 = 50</td>
<td>10 × 10 = 100</td>
</tr>
</tbody>
</table>
Read the table of 5 and write the answer.

\[2 \times 5 = \_\_\_\_\_
\]
\[5 \times 5 = \_\_\_\_\_
\]
\[7 \times 5 = \_\_\_\_
\]
\[8 \times 5 = \_\_\_\_
\]
\[3 \times 5 = \_\_\_\_
\]
\[6 \times 5 = \_\_\_\_
\]

Complete the table of 5.

<table>
<thead>
<tr>
<th>x</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>5</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

How many butterflies are there altogether?

\[2 \times \_\_\_\_ = \_\_\_\_
\]

2 times ___ equals ___

There are ____ butterflies altogether.

Complete the table of 10.

<table>
<thead>
<tr>
<th>x</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>10</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Multiplication Table of 6

1 x 6 = 6
1 times 6 equals 6

2 x 6 = 12
2 times 6 equals 12

3 x 6 = 18
3 times 6 equals 18

4 x 6 = 24
4 times 6 equals 24

5 x 6 = 30
5 times 6 equals 30

6 x 6 = 36
6 times 6 equals 36

7 x 6 = 42
7 times 6 equals 42

8 x 6 = 48
8 times 6 equals 48

9 x 6 = 54
9 times 6 equals 54

10 x 6 = 60
10 times 6 equals 60
### Multiplication Table of 7

<table>
<thead>
<tr>
<th>Multiplication</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x 7</td>
<td>7</td>
</tr>
<tr>
<td>2 x 7</td>
<td>14</td>
</tr>
<tr>
<td>3 x 7</td>
<td>21</td>
</tr>
<tr>
<td>4 x 7</td>
<td>28</td>
</tr>
<tr>
<td>5 x 7</td>
<td>35</td>
</tr>
<tr>
<td>6 x 7</td>
<td>42</td>
</tr>
<tr>
<td>7 x 7</td>
<td>49</td>
</tr>
<tr>
<td>8 x 7</td>
<td>56</td>
</tr>
<tr>
<td>9 x 7</td>
<td>63</td>
</tr>
<tr>
<td>10 x 7</td>
<td>70</td>
</tr>
</tbody>
</table>
Write the total number of objects.

There are 4 groups. Each group has 7 stars.

\[ 4 \times 7 = \____ \]

4 times 7 equals \______.

There are 2 groups. Each group has \____ carrots.

\[ 2 \times 6 = \____ \]

2 times 6 equals \_______.

Complete the table of 7.

<table>
<thead>
<tr>
<th>x</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>7</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Multiplication Table of 8

1 x 8 = 8
1 times 8 equals 8

2 x 8 = 16
2 times 8 equals 16

3 x 8 = 24
3 times 7 equals 21

4 x 8 = 32
4 times 7 equals 28

5 x 8 = 40
5 times 8 equals 40

6 x 8 = 48
6 times 8 equals 42

7 x 8 = 56
7 times 8 equals 56

8 x 8 = 64
8 times 8 equals 64

9 x 8 = 72
9 times 8 equals 72

10 x 8 = 80
10 times 8 equals 80
## Multiplication Table of 9

<table>
<thead>
<tr>
<th>Number</th>
<th>Multiplication</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$1 \times 9$</td>
<td>9</td>
</tr>
<tr>
<td>2</td>
<td>$2 \times 9$</td>
<td>18</td>
</tr>
<tr>
<td>3</td>
<td>$3 \times 9$</td>
<td>27</td>
</tr>
<tr>
<td>4</td>
<td>$4 \times 9$</td>
<td>36</td>
</tr>
<tr>
<td>5</td>
<td>$5 \times 9$</td>
<td>45</td>
</tr>
<tr>
<td>6</td>
<td>$6 \times 9$</td>
<td>54</td>
</tr>
<tr>
<td>7</td>
<td>$7 \times 9$</td>
<td>63</td>
</tr>
<tr>
<td>8</td>
<td>$8 \times 9$</td>
<td>72</td>
</tr>
<tr>
<td>9</td>
<td>$9 \times 9$</td>
<td>81</td>
</tr>
<tr>
<td>10</td>
<td>$10 \times 9$</td>
<td>90</td>
</tr>
</tbody>
</table>
Read the table of 8 and write the answer.

\[2 \times 8 = \____ \; \; \; 5 \times 8 = \____ \; \; \; 7 \times 8 = \____\]

\[8 \times 8 = \____ \; \; \; 3 \times 8 = \____ \; \; \; 6 \times 8 = \____\]

Complete the table of 8.

<table>
<thead>
<tr>
<th>\times</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>8</td>
<td></td>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

How many leaves are there altogether?

There are 4 groups. Each group has \____ leaves.

\[4 \times 9 = \____\]

4 times 9 equals \____

Complete the table of 9.

<table>
<thead>
<tr>
<th>\times</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>9</td>
<td></td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
More about Multiplication

Look at this picture.

We can describe this picture in 2 ways.

There are 3 groups.
Each group has 5 mangoes.

$3 \times 5 = 15$

There are 5 groups.
Each group has 3 mangoes.

$5 \times 3 = 15$

$5 \times 3 = 3 \times 5$
Let's look at some other examples.

There are 2 groups.
Each group has 3 stars.
\[ 2 \times 3 = 6 \]

There are 3 groups.
Each group has 2 stars.
\[ 3 \times 2 = 6 \]

There are 4 groups.
Each group has 3 triangles.
\[ 4 \times 3 = 12 \]

There are 3 groups.
Each group has 4 triangles.
\[ 3 \times 4 = 12 \]
Complete the blanks.

\[ 4 \times 5 = 20 \] so \[ 5 \times 4 = 20 \]

\[ 3 \times 8 = 24 \] so ___ \times ___ = 24

\[ 6 \times 3 = 18 \] so ___ \times ___ = 18

\[ 4 \times 6 = 24 \] so ___ \times ___ = 24

\[ 7 \times 2 = 14 \] so ___ \times ___ = 14

\[ 8 \times 5 = 40 \] so ___ \times ___ = 40

\[ 1 \times 9 = 9 \] so ___ \times ___ = 9

\[ 2 \times 4 = 8 \] so ___ \times ___ = 8

\[ 9 \times 6 = 54 \] so ___ \times ___ = 54

\[ 10 \times 3 = 30 \] so ___ \times ___ = 30
Look at this box. Are there any apples?

There are 0 apples.

What if we have three such boxes? How many apples do we have then?

0 + 0 + 0

We still have 0 apples.

3 × 0 = 0

If we multiply anything by 0, the answer is still 0.

5 × 0 = 0

Complete the following.

4 × 0 = ____

0 × 6 = ____

9 × ____ = 0
There are 3 boxes. Each box has 2 balls.

\[
3 \times 2 = 6
\]

We can also write this as:

\[
\begin{align*}
2 \\
\times 3 \\
\hline
6
\end{align*}
\]

We say the product of 3 and 2 is 6.

There are 4 boxes. Each pot has 2 flowers. How many total flowers are there?

\[
4 \times 2 = 8
\]

We can also write this as:

\[
\begin{align*}
2 \\
\times 4 \\
\hline
8
\end{align*}
\]

We say the product of 4 and 2 is 8.
Multiply the numbers and write the correct answer.

\[
\begin{array}{ccc}
2 & \times 1 & 2 \\
\hline
\end{array}
\quad
\begin{array}{ccc}
2 & \times 2 & 2 \\
\hline
\end{array}
\quad
\begin{array}{ccc}
2 & \times 3 & 7 \\
\hline
\end{array}
\quad
\begin{array}{ccc}
2 & \times 4 & 7 \\
\hline
\end{array}
\quad
\begin{array}{ccc}
2 & \times 0 & 0 \\
\hline
\end{array}
\quad
\begin{array}{ccc}
2 & \times 1 & 3 \\
\hline
\end{array}
\quad
\begin{array}{ccc}
3 & \times 1 & 3 \\
\hline
\end{array}
\quad
\begin{array}{ccc}
3 & \times 2 & 3 \\
\hline
\end{array}
\quad
\begin{array}{ccc}
3 & \times 3 & 3 \\
\hline
\end{array}
\quad
\begin{array}{ccc}
4 & \times 1 & 4 \\
\hline
\end{array}
\quad
\begin{array}{ccc}
4 & \times 2 & 4 \\
\hline
\end{array}
\quad
\begin{array}{ccc}
4 & \times 0 & 0 \\
\hline
\end{array}
\quad
\begin{array}{ccc}
5 & \times 1 & 6 \\
\hline
\end{array}
\quad
\begin{array}{ccc}
5 & \times 5 & 5 \\
\hline
\end{array}
\quad
\begin{array}{ccc}
5 & \times 1 & 1 \\
\hline
\end{array}
\end{array}
Anwar has 3 boxes. Each box has 21 coins. How many coins are there altogether?

\[
\begin{array}{c|c|c}
\text{Tens} & \text{Ones} & \text{Illustration} \\
2 & 1 & \begin{array}{c}
10 \\
10 \\
1
\end{array} \\
\hline
\end{array}
\]

\[
\begin{array}{c}
\times 3 \\
\hline
\end{array}
\]

Step 1:
Multiply 1 one by 3.

\[
\begin{array}{c|c|c}
\text{Tens} & \text{Ones} & \text{Result} \\
2 & 1 & 1 \times 3 = 3 \\
\hline
\end{array}
\]

Step 2:
Multiply 2 tens by 3.

\[
\begin{array}{c|c|c}
\text{Tens} & \text{Ones} & \text{Result} \\
2 & 1 & 2 \times 3 = 6 \\
\hline
\end{array}
\]

We say the product of 21 and 3 is 63.
Multiply the numbers and write the correct answer.

Tens  Ones
1  2
x  4
_____  

Tens  Ones
2  3
x  2
_____  

Tens  Ones
4  2
x  2
_____  

Tens  Ones
3  3
x  3
_____  

Tens  Ones
4  0
x  2
_____  

Tens  Ones
2  4
x  2
_____  

Tens  Ones
1  8
x  1
_____  

Tens  Ones
2  1
x  4
_____  

Tens  Ones
1  1
x  6
_____  

Tens  Ones
1  0
x  5
_____  

Tens  Ones
1  2
x  3
_____  

Tens  Ones
2  0
x  4
_____  

Tens  Ones
3  0
x  3
_____  

Tens  Ones
3  4
x  2
_____  

Tens  Ones
1  5
x  0
_____  

The product of 5 and 2 is 10.
There are 4 boxes. Each box has 3 coins.

Tens  Ones
4
\times 3
---

The product of 4 and 3 is 12.

Find the product of 2 and 5.

Tens  Ones
2
\times 5
---

The product of 2 and 5 is 10.
Multiply the numbers and write the correct answer.

<table>
<thead>
<tr>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
</tr>
<tr>
<td>x</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Tens</td>
<td>Ones</td>
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<td>3</td>
<td></td>
</tr>
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<td>5</td>
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<td>Tens</td>
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<td>8</td>
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<td>Tens</td>
<td>Ones</td>
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<td>2</td>
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<td>Tens</td>
<td>Ones</td>
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<td>9</td>
<td></td>
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<td></td>
<td>2</td>
</tr>
<tr>
<td>x</td>
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<td></td>
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</tr>
<tr>
<td>Tens</td>
<td>Ones</td>
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<tr>
<td>4</td>
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<td></td>
<td>3</td>
</tr>
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<td>x</td>
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<tr>
<td>Tens</td>
<td>Ones</td>
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<tr>
<td>9</td>
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<td>x</td>
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<tr>
<td>Tens</td>
<td>Ones</td>
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<td>7</td>
<td></td>
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<td></td>
<td>2</td>
</tr>
<tr>
<td>x</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
Find the product of 14 and 3.

Multiply the numbers and write the correct answer.

<table>
<thead>
<tr>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Step 1:

Multiply 4 ones by 3.

<table>
<thead>
<tr>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Multiply 1 ten by 3.

<table>
<thead>
<tr>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The product of 14 and 3 is 42.
Multiply the numbers and write the correct answer.

24 x 4 = 96

13 x 6 = 78

12 x 8 = 96

26 x 3 = 78

35 x 2 = 70

32 x 4 = 128

50 = 10

18 x 2 = 36

16 x 5 = 80

24 x 4 = 96

19 x 2 = 38

15 x 3 = 45

13 x 7 = 91

There are 3 children. Each child has 10 balls.

There are 30 balls altogether.
Multiplication problems in daily life

Ahmed has 6 sweets. Sana has also 6 sweets. How many sweets do they have in total?

Ahmed has 6 sweets. Sana has 6 sweets.

There are 2 children. Each child has 6 sweets. 

\[ 2 \times 6 = 12 \]

Ahmed and Sana have 12 sweets in total.

Hassan, Ali and Zara have 10 balls each. How many balls are there altogether?

There are 3 children. Each child has 10 balls. 

\[ 3 \times 10 = 30 \]

There are 30 balls altogether.
1. Ali has 2 bags. Each bag has 3 apples. How many apples does he have altogether?

2. Sana drinks 2 glasses of milk everyday. How many glasses does she drink in 4 days?

3. The price of a pencil is Rs. 5. Hamza buys 8 pencils. What is the total cost that he pays?

4. Ahmed has 8 books. Sana has 8 books. How many books do they have altogether?

5. There are 2 trees. Each tree has 5 birds sitting on it. How many birds are there altogether?
Ali’s mother has 9 biscuits.  

She gives 3 biscuits to Ali.  

9 - 3 = 6  

She has 6 biscuits left.  

She gives 3 biscuits to Sana.  

6 - 3 = 3  

She has 3 biscuits left.  

She gives 3 biscuits to Ahmed.  

3 - 3 = 0  

She has 0 biscuits left.  

This is called repeated subtraction.
There are 8 balls in the box.

How many times can we subtract 2 till we are left with 0?

\[
\begin{align*}
8 - 2 &= 6 \\
6 - 2 &= 4 \\
4 - 2 &= 2
\end{align*}
\]

We can subtract 2 four times.
Count the objects. Subtract 2 from them till you are left with 0.

\[
\begin{align*}
6 - 2 &= 4 \\
4 - 2 &= 2 \\
2 - 2 &= 0
\end{align*}
\]

We can subtract 2 \_\_\_\_\_ times.

\[
\begin{align*}
\_\_\_\_ - 2 &= \_\_\_\_ \\
\_\_\_\_ - 2 &= \_\_\_\_ \\
\_\_\_\_ - 2 &= \_\_\_\_ \\
\_\_\_\_ - 2 &= \_\_\_\_ \\
\_\_\_\_ - 2 &= \_\_\_\_ \\
\_\_\_\_ - 2 &= \_\_\_\_ \\
\end{align*}
\]

We can subtract 2 \_\_\_\_\_\_ times.

\[
\begin{align*}
\_\_\_\_ - 2 &= \_\_\_\_ \\
\_\_\_\_ - 2 &= \_\_\_\_ \\
\_\_\_\_ - 2 &= \_\_\_\_ \\
\_\_\_\_ - 2 &= \_\_\_\_ \\
\_\_\_\_ - 2 &= \_\_\_\_ \\
\_\_\_\_ - 2 &= \_\_\_\_ \\
\end{align*}
\]

We can subtract 2 \_\_\_\_\_\_ times.
Division

Ali has 6 balls.
He puts them equally into 2 boxes.

\[ 6 \div 2 = 3 \]
6 divided by 2 is equal to 3.
There are 3 balls in each box.

\[ \div \] is read as divided by.
\[ \div \] stands for division.

Now, Ali puts the balls equally into 3 boxes.

\[ 6 \div 3 = 2 \]
6 divided by 3 is equal to 2.
There are 2 balls in each box.
There are 10 apples in a box.

We want to divide them equally in 5 boxes.

How many apples can we put in each box?

He puts them equally into 5 boxes.

There are 3 apples in each box.

$10 \div 5 = 2$

10 divided by 5 is equal to 2.

We can put 2 apples in a box.

Now, All are the apples equally into 5 boxes.

There are 12 oranges in a box.

How many oranges are there in each box?

There are 5 apples in each box.

$12 \div 3 = 4$

12 divided by 3 is equal to 4. We can put 4 oranges in each box.
Divide the objects and write the correct answer.

8 ÷ 4 = __\_ boxes

How many biscuits will she put in each box?

16 ÷ 8 = __

9 ÷ 3 = __

12 ÷ 6 = __

10 ÷ 5 = __

15 ÷ 5 = __

14 ÷ 7 = __

Recall the table of 3.

27 ÷ 3 = __
Anum made 15 biscuits.

She wants to put them equally in 3 boxes.
How many biscuits will she put in each box?

\[ 15 \div 3 = ? \]

Recall the table of 3.

\[ 1 \times 3 = 3 \]
\[ 2 \times 3 = 6 \]
\[ 3 \times 3 = 9 \]
\[ 4 \times 3 = 12 \]
\[ 5 \times 3 = 15 \]

5 times 3 is equal to 15.
So, 15 divided by 3 is equal to 5.

\[ 15 \div 3 = 5 \]

Anum can put 5 biscuits in each box.
Divide these numbers.

<table>
<thead>
<tr>
<th>Division</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 ÷ 2</td>
<td>2</td>
</tr>
<tr>
<td>6 ÷ 2</td>
<td>3</td>
</tr>
<tr>
<td>9 ÷ 3</td>
<td>3</td>
</tr>
<tr>
<td>8 ÷ 4</td>
<td>2</td>
</tr>
<tr>
<td>10 ÷ 5</td>
<td>2</td>
</tr>
<tr>
<td>25 ÷ 5</td>
<td>5</td>
</tr>
<tr>
<td>16 ÷ 4</td>
<td>4</td>
</tr>
<tr>
<td>18 ÷ 9</td>
<td>2</td>
</tr>
<tr>
<td>21 ÷ 3</td>
<td>7</td>
</tr>
<tr>
<td>56 ÷ 8</td>
<td>7</td>
</tr>
<tr>
<td>42 ÷ 7</td>
<td>6</td>
</tr>
<tr>
<td>30 ÷ 6</td>
<td>5</td>
</tr>
<tr>
<td>6 ÷ 3</td>
<td>2</td>
</tr>
<tr>
<td>15 ÷ 3</td>
<td>5</td>
</tr>
<tr>
<td>28 ÷ 4</td>
<td>7</td>
</tr>
<tr>
<td>35 ÷ 7</td>
<td>5</td>
</tr>
<tr>
<td>64 ÷ 8</td>
<td>8</td>
</tr>
<tr>
<td>90 ÷ 9</td>
<td>10</td>
</tr>
<tr>
<td>72 ÷ 8</td>
<td>9</td>
</tr>
<tr>
<td>16 ÷ 2</td>
<td>8</td>
</tr>
<tr>
<td>18 ÷ 6</td>
<td>3</td>
</tr>
<tr>
<td>20 ÷ 4</td>
<td>5</td>
</tr>
<tr>
<td>10 ÷ 2</td>
<td>5</td>
</tr>
<tr>
<td>40 ÷ 10</td>
<td>4</td>
</tr>
</tbody>
</table>
Divide 28 by 2.

\[ ____ = 6 \div 0 \quad 28 \div 2 = 5 \div 0 \quad ____ = 5 \div 4 \]

**Step 1:**
Write the division sum like this.

\[ ____ = 5 \div 0 \quad ____ = 2 \div 0 \quad ____ = 4 \div 8 \]

\[ 2 \overline{)2 \quad 8} \]

\[ ____ = 3 \div 1 \quad ____ = 9 \div 8 \quad ____ = 4 \div 8 \]

**Step 2:**
Start from the left side. Divide 2 by 2.

\[ ____ = 1 \div 0 \quad ____ = 5 \div 5 \quad ____ = 8 \div 8 \]

\[ 2 \overline{)2 \quad 8} \]

\[ ____ = 8 \div 8 \quad ____ = 3 \div 6 \]

2 \times 1 = 2 \quad \text{so,} \quad 8 \div 2 = 4 \quad \text{so,}

**Step 3:**
Divide 8 by 2.

\[ ____ = 8 \div 8 \quad ____ = 5 \div 5 \]

\[ 2 \overline{)2 \quad 8} \]

\[ 2 \div 2 = 1 \quad 8 \div 2 = 4 \quad 0 \]

\[ 28 \div 2 = 14 \]
Divide these numbers.

\[ 25 \div 5 \]

\[ 3 \sqrt{39} \]

\[ 2 \sqrt{26} \]

\[ 5 \sqrt{50} \]

Step 1:

Write the division sum like this:

\[ 2 \sqrt{2} \]

Step 2:

Start from the left side. Divide 7 by 2.

\[ 6 \sqrt{66} \]

\[ 3 \sqrt{36} \]

\[ 5 \sqrt{50} \]

We cannot divide 7 by 2. We will be left with 5.

\[ 4 \sqrt{48} \]

Step 3:

Divide 25 by 2.

\[ 2 \sqrt{62} \]

\[ 3 \sqrt{96} \]

\[ 2 \sqrt{46} \]

\[ 5 \times 5 = 25 \]

\[ 25 \div 5 = 5 \]

\[ 25 \div 5 = 12 \]
Divide 75 by 5.

\[ 75 \div 5 \]

**Step 1:**
Write the division sum like this.

\[ 5 \overline{\div} 75 \]

**Step 2:**
Start from the left side. Divide 7 by 5.

\[ \begin{array}{c}
  1 \\
  \hline
  5 \overline{\div} 75 \\
  - 5 \\
  \hline
  2 \\
\end{array} \]

We cannot divide 7 equally by 5. We will be left with 2.

**Step 3:**
Divide 25 by 5.

\[ \begin{array}{c}
  1 \\
  \hline
  5 \overline{\div} 75 \\
  - 5 \\
  \hline
  25 \\
  - 25 \\
  \hline
  0 \\
\end{array} \]

\[ 5 \times 5 = 25 \text{ so, } 25 \div 5 = 5 \]

\[ 75 \div 5 = 15 \]
Divide these numbers

\[4 \div 72\]
\[2 \div 34\]
\[3 \div 45\]
\[7 \div 84\]
\[5 \div 65\]
\[8 \div 96\]
\[6 \div 90\]
\[5 \div 85\]
\[2 \div 46\]
\[4 \div 52\]
\[5 \div 90\]
\[3 \div 72\]
Division problems in daily life

There are 28 biscuits. The biscuits are put equally in 7 boxes. How many biscuits are put in each box?

\[ 28 \div 7 = ? \]

There are 28 biscuits.

The biscuits are put equally into 7 boxes.

There are 4 biscuits in each box.

\[ 28 \div 7 = 4 \]
1. Miss Amna has 14 sweets. She divides them equally between Ali and Sana. How many sweets do each Ali and Sana get?

2. Ahmed has 18 balls. He puts the balls equally into 2 boxes. How many balls does he put in each box?

3. There are 30 pencils. Each student gets 3 pencils. How many students are in the class?

4. There are 24 balloons. Each child gets 8 balloons. How many children are there?

5. There are 48 toffees in a pack. They are divided equally among 8 children. How many toffees does each child get?
Measuring length

Ahmed and Sana want to measure the length of different objects.

They can use a ruler and measure the length in centimetres. We can write centimetres as cm.

The pencil is 5 cm long.

The eraser is 2 cm long.

The scissors are 10 cm long.

We use centimetres for shorter objects.
Measure the length of the following objects.

The length of the necklace is ______ cm.

The length of the pencil is ______ cm.

The length of the nail is ______ cm.

The length of the watch is ______ cm.
We can also measure length in metres. We can write metres as m. We use metres for longer objects.

\[1\text{m} = 100\text{cm}\]

Look at the metre ruler. It is 1 m long.

The plant is less than 1 m.
The blackboard is almost 1 m tall.

Look at the objects. Tell whether you will use metres or centimetres to measure them.

<table>
<thead>
<tr>
<th>Pencil box</th>
<th>cm</th>
<th>m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car</td>
<td>cm</td>
<td>m</td>
</tr>
</tbody>
</table>
Kilometres is another unit of length. We can write kilometres as km.

1 km = 1000 m

Kilometres is used to measure distances from one place to another.

The distance between Ali's school and Minar-e-Pakistan is 5 km.

The distance between Sana's school and the railway station is 10 km.
Ahmed draws a line. It is 4 cm long.
Hamza draws a line. It is 5 cm long.
What is the total length of both lines?

\[
\begin{align*}
4 \text{ cm} \\
+ 5 \text{ cm} \\
\hline
9 \text{ cm}
\end{align*}
\]

The total length of both lines is 9 cm.

Add the lengths.

\[
\begin{array}{ccc}
4 \text{ cm} & + & 4 \text{ cm} & = & 13 \text{ cm} \\
+ & 52 \text{ cm} & & & \\
\hline & 53 \text{ cm} & & \\
43 \text{ m} & + & 24 \text{ m} & = & 67 \text{ m} \\
+ & 21 \text{ m} & & & \\
\hline & 68 \text{ m} & & \\
& 80 \text{ km} & + & 43 \text{ km} & = & 123 \text{ km} \\
\hline
\end{array}
\]
Measuring Mass

Remember the units we used to measure mass.

\[ g = 1 \text{ gram} \]

\[ kg = 1 \text{ kilogram} \]

\[ 1 \text{kg} = 1000g \]

Zara wants to find the mass of the pencil.

The mass of the pencil is 5 grams.

Ahmed wants to find the mass of the bag of flour.

The mass of a bag of flour is 1 kilogram.
Look at the pictures. Write the mass of each object.

__________________ g

__________________ kg

__________________ kg

__________________ g

Ahmed buys fruit from the market. The mass of the apples is 2 kg. The mass of oranges is 3 kg. What is the total mass of apples and oranges?

\[ \frac{2}{kg} + \frac{3}{kg} = \frac{5}{kg} \]

The total mass of the apples and oranges is 5 kg.
Add the mass of objects.

\[
\begin{array}{ccc}
43 \text{ g} & +29 \text{ g} & 45 \text{ g} \\
64 \text{ g} & +13 \text{ g} & +13 \text{ g} \\
18 \text{ g} & +21 \text{ g} & 46 \text{ g} \\
+21 \text{ g} & +46 \text{ g} & +21 \text{ g} \\
78 \text{ kg} & +23 \text{ kg} & 26 \text{ kg} \\
42 \text{ kg} & +53 \text{ kg} & +13 \text{ kg} \\
\end{array}
\]

Subtract the mass of objects.

\[
\begin{array}{ccc}
65 \text{ g} & -13 \text{ g} & 56 \text{ g} \\
48 \text{ g} & -32 \text{ g} & -12 \text{ g} \\
67 \text{ g} & -32 \text{ g} & 97 \text{ g} \\
49 \text{ g} & -18 \text{ g} & -86 \text{ g} \\
35 \text{ kg} & -19 \text{ kg} & 74 \text{ kg} \\
63 \text{ kg} & -24 \text{ kg} & -28 \text{ kg} \\
\end{array}
\]
Measuring Capacity

Look at the pot. How many glasses of water can it hold?

This pot can hold 5 glasses of water.

We can also use a standard unit of measurement to measure capacity.

**Litre** is the standard unit of measurement used to measure capacity. We can write it as **L**.

**Millilitres** is also a standard unit of measurement used to measure capacity. We can write it as **mL**.

\[1L = 1000ml\]

Look at this jug.

This has 800 **mL** of water.
Look at the measuring jug. Write the amount of water in the jug.

_____ mL  _____ mL  _____ mL

Add the mass of objects.

\[
\begin{align*}
61\text{mL} & \quad + & \quad 35\text{mL} & \quad + & \quad 42\text{mL} \\
28\text{mL} & \quad + & \quad 12\text{mL} & \quad + & \quad 37\text{mL} \\
50\text{L} & \quad + & \quad 32\text{L} & \quad + & \quad 16\text{L} \\
45\text{L} & \quad + & \quad 48\text{L} & \quad + & \quad 24\text{L}
\end{align*}
\]

Subtract the mass of objects.

\[
\begin{align*}
67\text{mL} & \quad - & \quad 43\text{mL} \\
82\text{mL} & \quad - & \quad 65\text{mL} \\
43\text{L} & \quad - & \quad 18\text{L}
\end{align*}
\]
Measurement Problems in Daily Life

1. Ahmed bought 57 metres long pipe. His brother bought 18 metres long pipe. What is the total length of both pipes?

2. Ali has a ball. It’s mass is 40 g. Sana has a ball. It’s mass is 35 g. What is the total mass of both balls?

3. Ali drank 2 litres of water. Sana drank 3 litres of water. How many litres did they drink altogether?

4. The distance from Ali’s house to the hospital is 20 km. The distance from the hospital to the park is 35 km. What is the sum of both distances?

5. My father bought 10 kg flour and 5 kg sugar. What is the total mass of both flour and sugar?
Fractions

Look at the circle.
It is divided into 2 equal parts.
1 part out of 2 is coloured
\( \frac{1}{2} \) of the circle is coloured.

The circle is divided into 4 equal parts.
1 part out of 4 is coloured.
\( \frac{1}{4} \) of the circle is coloured.

The circle divided into 3 equal parts.
1 part out of 3 is coloured.
\( \frac{1}{3} \) of the circle is coloured.

\( \frac{1}{2}, \frac{1}{4} \text{ and } \frac{1}{3} \) are examples of fractions.

A fraction shows a part of a whole that is cut into equal parts.
Look at the rectangle.

It is divided into 3 equal parts.

2 parts out of 3 are coloured.

\[ \frac{2}{3} \] of the rectangle is coloured.

---

The square is divided into 4 equal parts.

3 parts out of 4 are coloured.

\[ \frac{3}{4} \] of the square is coloured.

---

The circle is divided into 6 equal parts.

1 part out of 6 is coloured.

\[ \frac{1}{6} \] of the square is coloured.
A fraction has 2 parts.

A numerator shows the number of equal parts of a whole that are coloured.

A denominator shows the number of equal parts the whole is divided into.
Look at the rectangle. What fraction of the rectangle is coloured?

**Step 1**
Count the total number of parts. Write them under the line. This is the **denominator**.

\[
\frac{5}{5}
\]

The rectangle has 5 parts so we will write 5 under the line.

**Step 2**
Count the number of coloured parts. Write them above the line. This is the **numerator**.

\[
\frac{1}{5}
\]

The rectangle has 1 coloured part so we will write 1 above the line.

\[
\frac{1}{5}
\]
of the rectangle is coloured.
Look at the total number of parts. Then look at the coloured part. Write the fraction that is coloured.
Look at the rectangle.

Colour \( \frac{2}{3} \) of the rectangle.

\[ \frac{2}{3} = 2 \text{ out of } 3 \text{ equal parts} \]

We will colour 2 out of 3 parts.

Look at the fraction and colour the figure.

<table>
<thead>
<tr>
<th>Fraction</th>
<th>Diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \frac{3}{4} )</td>
<td>![Four parts divided into 3]</td>
</tr>
<tr>
<td>( \frac{1}{2} )</td>
<td>![Two parts divided into 2]</td>
</tr>
<tr>
<td>( \frac{5}{8} )</td>
<td>![Eight parts divided into 5]</td>
</tr>
</tbody>
</table>
Match the fraction with the correct figure.

1/3

5/12

1/4

1/8

2/5
Comparing Fractions

It is Ali’s birthday.

Ali’s mother cut the cake into 8 equal pieces.

Sana ate 1 piece. We can say that she ate $\frac{1}{8}$ of the cake.

Ali ate 3 pieces. We can say that he ate $\frac{3}{8}$ of the cake.

Who ate more cake?

$\frac{3}{8}$ is greater than $\frac{1}{8}$ so Ali ate more cake.
Compare the fractions and write the correct sign in the middle.

>  =  <

Remember:
- open side: >
- closed side: <

= equal
Which fraction is greater?

\[ \frac{5}{8} \quad \frac{2}{8} \]

Compare the numerators.

\[ \frac{5}{8} \quad \frac{2}{8} \]

5 is greater than 2.

\[ \frac{5}{8} \] is greater than \[ \frac{2}{8} \]

Use these symbols to compare fractions.

\[ > \quad < \quad = \]

\[ \frac{3}{7} \quad \frac{5}{7} \]

\[ \frac{2}{5} \quad \frac{1}{5} \]

\[ \frac{3}{10} \quad \frac{7}{10} \]

\[ \frac{3}{8} \quad \frac{7}{8} \]

\[ \frac{5}{12} \quad \frac{7}{12} \]

\[ \frac{3}{4} \]

\[ \frac{3}{4} \]

\[ \frac{5}{8} \quad \frac{1}{8} \]

\[ \frac{1}{9} \quad \frac{8}{9} \]

\[ \frac{1}{5} \quad \frac{3}{5} \]
Addition and Subtraction of Fractions

Ali’s mother makes a pizza.
She divides the pizza into 6 parts.

Sana eats $\frac{1}{6}$ of pizza.

Ali eats $\frac{1}{6}$ of pizza.

$\frac{1}{6} + \frac{1}{6} = \frac{2}{6}$

Together, Ali and Sana eat $\frac{2}{6}$ of pizza.

To add fractions, add the numerators.

$\frac{1}{5} + \frac{3}{5} = \frac{4}{5}$
Look at the figures. Add the fraction and colour the figure.

\[
\begin{align*}
\text{Round numbers.} & \quad + & \quad \text{Round numbers.} & = & \quad \text{Round numbers.} \\
\text{Round numbers.} & \quad + & \quad \text{Round numbers.} & = & \quad \text{Round numbers.} \\
\text{Round numbers.} & \quad + & \quad \text{Round numbers.} & = & \quad \text{Round numbers.} \\
\text{Round numbers.} & \quad + & \quad \text{Round numbers.} & = & \quad \text{Round numbers.}
\end{align*}
\]
Add the fraction and write the correct answer.

\[
\frac{2}{5} + \frac{1}{5} = \frac{1}{6} + \frac{3}{6} = \\
\frac{7}{12} + \frac{3}{12} = \frac{4}{10} + \frac{2}{10} = \\
\frac{7}{11} + \frac{1}{11} = \frac{4}{9} + \frac{2}{9} = \\
\frac{3}{8} + \frac{1}{8} = \frac{2}{10} + \frac{7}{10} = \\
\frac{2}{7} + \frac{4}{7} = \frac{3}{7} + \frac{1}{7} = \\
\frac{11}{20} + \frac{7}{20} = \frac{10}{17} + \frac{2}{17} =
\]
Look at the circle. It has 4 equal parts.

Ali colours $\frac{3}{4}$ of the circle.

He then erases colour from $\frac{1}{4}$ of the circle.

What fraction is left coloured?

$$\frac{3}{4} - \frac{1}{4} = \frac{2}{4}$$

$\frac{2}{4}$ of the circle is left coloured.

To subtract fractions, subtract the numerators.

$$\frac{5}{7} - \frac{1}{7} = \frac{4}{7}$$
Look at the figures. Subtract the fraction and colour the remaining figure.
Subtract the fraction and write the correct answer.

\[
\frac{8}{13} - \frac{4}{13} = \frac{4}{7} - \frac{2}{7} = \\
\frac{4}{9} - \frac{1}{9} = \frac{12}{19} - \frac{6}{19} = \\
\frac{6}{10} - \frac{2}{10} = \frac{7}{11} - \frac{5}{11} = \\
\frac{3}{8} - \frac{1}{8} = \frac{5}{12} - \frac{1}{12} = \\
\frac{5}{9} - \frac{3}{9} = \frac{9}{13} - \frac{5}{13} = \\
\frac{8}{17} - \frac{3}{17} = \frac{8}{15} - \frac{4}{15} = 
\]
Equivalent Fractions

Ali makes a circle.
He divides the circle into 4 parts.
He colours \( \frac{1}{4} \) of the circle.

Sana makes a circle.
She divides the circle into 8 parts.
She colours \( \frac{2}{8} \) of the circle.

The shaded area remains the same.

\[
\begin{align*}
\frac{1}{4} & = \frac{2}{8} \\
\end{align*}
\]

These are known as equivalent fractions.
Look at the fraction. Look at the options. Tick the equivalent fraction.
A clock tells us the time.

It has a **minute hand** and an **hour hand**.

The longer hand is the minute hand. It shows us the minutes.

The shorter hand is the hour hand. It shows us the hours.

Each small marking on the clock stands for 1 minute.

There are **60 markings** on the clock.

There are **60 minutes** in 1 hour.
Look at this clock.

The **hour hand** is at 5.
The **minute hand** is at 3.
This means it is 15 minutes after 5 o’clock.

Look at this clock.

The hour hand is at 6. We write 6 on the left side.

6 :

The minute hand is at 4. This means it is 20 minutes after 6 o’clock. We write 20 on the right hand side.

6 : 20

We read this as six twenty.
Read the time. Make hands on the clock.

10:15
11:30
4:35
5:20
1:10
3:50
Match the time with the correct clock.

- 8:50
- 12:05
- 2:00
- 11:20
Hamza and Sana are at the school.

The time is 8 a.m.

We use a.m. to talk about time just after 12 at night to just before 12 in the morning.

Hamza and Sana are eating dinner.

The time is 8 p.m.

We use p.m. to talk about time just after 12 in the morning to just before 12 at night.

Read the sentence and encircle the right option.

We go to school at 7 ____.

Sana eats her breakfast at 9 ____.

I go to sleep at 11 ____.
Look at the clock. Read the time of the day. Write the time under each clock with a.m. and p.m.
Look at the time.
It is 3:00.
We say it is 3 o’clock.

What will be the time after 2 hours?

\[
\begin{array}{c}
3 \\
+ 2 \\
\hline
5 \\
\end{array}
\]

It will be 5 o’clock after 2 hours.

What will be the time after 2 more hours?

\[
\begin{array}{c}
5 \\
+ 2 \\
\hline
7 \\
\end{array}
\]

It will be 7 o’clock after 2 more hours.
Look at the time.
It is 1 o’clock.

What will be the time after 3 hours?

Look at the time.
It is 5 o’clock.

What will be the time after 1 hour?

Ali left the house at 6 o’clock. He reached Islamabad after 5 hours. What was the time?

Anum started her homework at 2 o’clock. She finished it in 3 hours. What was the time then?
Look at the time.

It is 5:00.

We say it is 5 o'clock.

What will be the time 2 hours before?

\[
\begin{align*}
5 & - 2 \\
\hline
3
\end{align*}
\]

It will be 3 o'clock 2 hours before.

What will be the time 1 hour before 3 o'clock?

\[
\begin{align*}
3 & - 1 \\
\hline
2
\end{align*}
\]

It will be 2 o'clock 1 hour before 3 o'clock.
Look at the time.
It is 10 o’clock.

What will be the time 3 hours before?

Look at the time.
It is 8 o’clock.

What will be the time 4 hours before?

It is 3 o’clock. Hassan started his homework 2 hours before. What was the time then?

It is 5 o’clock. Sana went to the market 3 hours before. What was the time then?
Shapes

This is a triangle. A triangle has three sides.

This is a rectangle. A rectangle has 2 pairs equal sides.

This is a circle. It has no side.

This is a square. A square has 4 equal sides.
Colour the shape that is like the one in the first column.

<table>
<thead>
<tr>
<th>Green Shape</th>
<th>Shapes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circle</td>
<td>Circle, Hexagon, Circle, Triangle, Circle, Triangle</td>
</tr>
<tr>
<td>Square</td>
<td>Triangle, Square, Rectangle, Triangle, Rectangle, Triangle</td>
</tr>
<tr>
<td>Triangle</td>
<td>Triangle, Circle, Triangle, Circle, Triangle</td>
</tr>
<tr>
<td>Rectangle</td>
<td>Rectangle, Square, Rectangle, Square, Rectangle</td>
</tr>
<tr>
<td>Oval</td>
<td>Hexagon, Circle, Hexagon, Circle, Hexagon</td>
</tr>
<tr>
<td>Triangle</td>
<td>Rectangle, Square, Rectangle, Square, Rectangle</td>
</tr>
</tbody>
</table>

154
A rectangle has 4 sides.

A square has 4 sides.

Both square and rectangle are quadrilaterals.

All quadrilaterals have 4 sides.

Write 1 in all quadrilaterals, 2 in all triangles and 3 in all circles.
Look at this circle.

It has a centre.

We can draw a line from the centre to a point on the circle.

This line is called the radius of the circle.

We can draw a line from one point on the circle to another point, through the centre.

This line is called the diameter of the circle.

Look at the circle. Tell whether the line is of radius or diameter.
Look at this square.

3 cm

Each side is 3 cm long.

What is the total length of the square?

3 cm + 3 cm + 3 cm + 3 cm = 12 cm

The total length of the square is 12 cm.

This is called the perimeter of the square.

The perimeter of a figure is the total distance around all sides of the figure.

To find the perimeter:

1. Look at the length of each side of the figure.

2. Add all the lengths.
Find the perimeter of the triangle.

3 cm

3 cm + 3 cm + 3 cm = 9 cm

Find the perimeter of the rectangle.

4 cm

2 cm + 2 cm + 4 cm + 4 cm = 12 cm

Find the perimeter of the square.

2 cm

2 cm + 2 cm + 2 cm + 2 cm = 8 cm
Read the length of each side of the figure. Find the perimeter.

Perimeter = ________

Perimeter = ________

Perimeter = ________
Picture graphs

Imran buys four types of fruits. He uses a picture graph to show the number of each type of fruit he has bought.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Apples</td>
<td>Bananas</td>
<td>Oranges</td>
<td>Mangoes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Each 🍎  stands for 1 fruit.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

We can read the picture graph by counting the 🍎

Apples: There are 6 🍎 so he buys 6 apples.

Bananas: There are 3 🍌 so he buys 3 bananas.

Oranges: There are 4 🍊 so he buys 4 oranges.

Mangoes: There are 2 🍊 so he buys 2 mangoes.
The picture graph below shows the number of books that each child has.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ahmed</td>
<td>Haris</td>
<td>Sana</td>
<td>Anum</td>
</tr>
<tr>
<td><img src="image.png" alt="Graph" /></td>
<td><img src="image.png" alt="Graph" /></td>
<td><img src="image.png" alt="Graph" /></td>
<td><img src="image.png" alt="Graph" /></td>
</tr>
</tbody>
</table>

Each 🟢 stands for 1 book.

Read the picture graph by counting 🟢. Write the number of books that each child has.

Ahmed: ____________

Haris: ____________

Sana: ____________

Anum: ____________
The picture graph below shows the number of balloons each child has.

<table>
<thead>
<tr>
<th></th>
<th>Ahmed</th>
<th>Haris</th>
<th>Sana</th>
<th>Anum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Each</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>stand</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>for</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
| 1     | balloon.

Read the picture graph by counting ●. Write the number of balloons that each child has.

Ahmed: ____________

Haris: ____________

Sana: ____________

Anum: ____________
DENGUE FEVER

This fever is caused due to the bite of a specific kind of mosquito. What's special about this mosquito is that it has white stripes on its body and it bites from sunrise to sunset.

Identification of the disease
The presence of virus of this disease in the body can be assured through blood test in the laboratory.

Indications
The specific indications of this disease include fever with:
- Severe headache, cold and flu.
- Pain in body, back and joints.
- Pain behind the eyes.
- Presence of red spots on the body.
- In case of serious illness, bleeding starts from different parts of body i.e. mouth, nose, etc.

If there are above indications, take the patient to nearest health centre and give him the liquids as prescribed by the doctor.

Precautionary Measures
- Keep your houses and work places protected against mosquitoes.
- Keep houses and work places airy, bright and moisture-free.
- Fix nets on doors and windows.
- Wear full sleeve clothes.
- Use mosquito nets while sleeping.
- Keep the overhead water tanks covered.
- Empty water containers after a week, let them dry and then fill again.
- Water should not fall from the overhead water tanks to accumulate permanently, instead dry it.
- Water should not accumulate in any case both inside or outside the house.
- Keep your houses and mohallah's clean.
- Keep the fence and hedge boundaries duly trimmed both inside and outside the house and spray over them with insecticides, particularly in the evening.
- Water should not stay all the time in the flower pots, flower beds, etc. Instead water them only in the morning every alternate day.