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The Sindh Textbook Board is an organization charged with the preparation and publication of textbooks in the province of Sindh. Its prime objective is to develop and produce textbooks which are conductive to equip the new generation with the knowledge and acumen to prepare them to face the challenges of the rapidly changing environment. In this age of knowledge explosion and development of technology not witnessed in the human history, efforts have to be made to ensure that our children do not lag behind. The Board also strives to ensure that Universal Islamic Ideology, culture and traditions are not compromised in developing the textbooks.

To accomplish this noble task, a team of educationists, experts, working teachers and friends endeavor tirelessly to develop, text and improve contents, layout and design of the textbooks.

An attempt has made in this textbook to provide horizontal and vertical integration. The efforts of our experts and production personnel can bring about the desired results only if these textbooks are used effectively by teachers and students. Their suggestions will help us in further improving the qualitative contents of textbooks.

Chairman
Sindh Textbook Board
Ordinal Numbers
Write ordinal numbers from first to twentieth
We already know to identify the position of objects by ordinal numbers. Let us revise the ordinal numbers.

Activity 1  Colour first, third and fifth positions in red.

Activity 2  Write the missing ordinal numbers.

Teacher’s Note  Teacher should revise and do more practice of ordinal numbers by using students in the class. For example rows/columns of students books, benches/chairs etc.
### Activity 1
Read the positions of the following students.

- First (1st)
- Second (2nd)
- Third (3rd)
- Fourth (4th)
- Fifth (5th)
- Sixth (6th)
- Seventh (7th)
- Eighth (8th)
- Ninth (9th)
- Tenth (10th)

### Activity 2
Read and trace the following ordinal numbers.

<table>
<thead>
<tr>
<th>Ordinal number (in words)</th>
<th>Ordinal number (in figures)</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>1st</td>
</tr>
<tr>
<td>Second</td>
<td>2nd</td>
</tr>
<tr>
<td>Third</td>
<td>3rd</td>
</tr>
<tr>
<td>Fourth</td>
<td>4th</td>
</tr>
<tr>
<td>Fifth</td>
<td>5th</td>
</tr>
<tr>
<td>Sixth</td>
<td>6th</td>
</tr>
<tr>
<td>Seventh</td>
<td>7th</td>
</tr>
<tr>
<td>Eighth</td>
<td>8th</td>
</tr>
<tr>
<td>Ninth</td>
<td>9th</td>
</tr>
<tr>
<td>Tenth</td>
<td>10th</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ordinal number (in words)</th>
<th>Ordinal number (in figures)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eleventh</td>
<td>11th</td>
</tr>
<tr>
<td>Twelfth</td>
<td>12th</td>
</tr>
<tr>
<td>Thirteenth</td>
<td>13th</td>
</tr>
<tr>
<td>Fourteenth</td>
<td>14th</td>
</tr>
<tr>
<td>Fifteenth</td>
<td>15th</td>
</tr>
<tr>
<td>Sixteenth</td>
<td>16th</td>
</tr>
<tr>
<td>Seventeenth</td>
<td>17th</td>
</tr>
<tr>
<td>Eighteenth</td>
<td>18th</td>
</tr>
<tr>
<td>Nineteenth</td>
<td>19th</td>
</tr>
<tr>
<td>Twentieth</td>
<td>20th</td>
</tr>
</tbody>
</table>

### Teacher’s Note
Teacher should do practice of ordinal numbers from 1st to 20th by using flash cards of ordinal numbers in the class.
Read the position of animals:

(1) Tick (✓) the position of animals shown in the above picture:

<table>
<thead>
<tr>
<th>Animal</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6th</td>
</tr>
<tr>
<td></td>
<td>7th✓</td>
</tr>
<tr>
<td></td>
<td>8th</td>
</tr>
<tr>
<td></td>
<td>3rd</td>
</tr>
<tr>
<td></td>
<td>4th</td>
</tr>
<tr>
<td></td>
<td>5th</td>
</tr>
<tr>
<td></td>
<td>5th</td>
</tr>
<tr>
<td></td>
<td>6th</td>
</tr>
<tr>
<td></td>
<td>7th</td>
</tr>
<tr>
<td></td>
<td>8th</td>
</tr>
</tbody>
</table>

(2) Write the position of animals shown in the above picture:

<table>
<thead>
<tr>
<th>Animal</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1st</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
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<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
(3) Write the missing positions of vehicles:

(4) Write the ordinal number of vehicles in figures and words according to the position shown in the above picture:

<table>
<thead>
<tr>
<th>Vehicle</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In figures</td>
</tr>
<tr>
<td><img src="image" alt="Car" /></td>
<td>2nd</td>
</tr>
<tr>
<td><img src="image" alt="School Bus" /></td>
<td></td>
</tr>
<tr>
<td><img src="image" alt="Fire Truck" /></td>
<td></td>
</tr>
<tr>
<td><img src="image" alt="Truck" /></td>
<td></td>
</tr>
<tr>
<td><img src="image" alt="Loader" /></td>
<td></td>
</tr>
<tr>
<td><img src="image" alt="Truck" /></td>
<td></td>
</tr>
<tr>
<td><img src="image" alt="Car" /></td>
<td></td>
</tr>
<tr>
<td><img src="image" alt="Car" /></td>
<td></td>
</tr>
<tr>
<td><img src="image" alt="Bus" /></td>
<td></td>
</tr>
</tbody>
</table>
Numbers in words
Write numbers 1 – 100 in words

**Activity 1**  Read and trace the numbers 1–50 in words.

<table>
<thead>
<tr>
<th>In figures</th>
<th>In words</th>
<th>In figures</th>
<th>In words</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>One</td>
<td>26</td>
<td>Twenty six</td>
</tr>
<tr>
<td>2</td>
<td>Two</td>
<td>27</td>
<td>Twenty seven</td>
</tr>
<tr>
<td>3</td>
<td>Three</td>
<td>28</td>
<td>Twenty eight</td>
</tr>
<tr>
<td>4</td>
<td>Four</td>
<td>29</td>
<td>Twenty nine</td>
</tr>
<tr>
<td>5</td>
<td>Five</td>
<td>30</td>
<td>Thirty</td>
</tr>
<tr>
<td>6</td>
<td>Six</td>
<td>31</td>
<td>Thirty one</td>
</tr>
<tr>
<td>7</td>
<td>Seven</td>
<td>32</td>
<td>Thirty two</td>
</tr>
<tr>
<td>8</td>
<td>Eight</td>
<td>33</td>
<td>Thirty three</td>
</tr>
<tr>
<td>9</td>
<td>Nine</td>
<td>34</td>
<td>Thirty four</td>
</tr>
<tr>
<td>10</td>
<td>Ten</td>
<td>35</td>
<td>Thirty five</td>
</tr>
<tr>
<td>11</td>
<td>Eleven</td>
<td>36</td>
<td>Thirty six</td>
</tr>
<tr>
<td>12</td>
<td>Twelve</td>
<td>37</td>
<td>Thirty seven</td>
</tr>
<tr>
<td>13</td>
<td>Thirteen</td>
<td>38</td>
<td>Thirty eight</td>
</tr>
<tr>
<td>14</td>
<td>Fourteen</td>
<td>39</td>
<td>Thirty nine</td>
</tr>
<tr>
<td>15</td>
<td>Fifteen</td>
<td>40</td>
<td>Forty</td>
</tr>
<tr>
<td>16</td>
<td>Sixteen</td>
<td>41</td>
<td>Forty one</td>
</tr>
<tr>
<td>17</td>
<td>Seventeen</td>
<td>42</td>
<td>Forty two</td>
</tr>
<tr>
<td>18</td>
<td>Eighteen</td>
<td>43</td>
<td>Forty three</td>
</tr>
<tr>
<td>19</td>
<td>Nineteen</td>
<td>44</td>
<td>Forty four</td>
</tr>
<tr>
<td>20</td>
<td>Twenty</td>
<td>45</td>
<td>Forty five</td>
</tr>
<tr>
<td>21</td>
<td>Twenty one</td>
<td>46</td>
<td>Forty six</td>
</tr>
<tr>
<td>22</td>
<td>Twenty two</td>
<td>47</td>
<td>Forty seven</td>
</tr>
<tr>
<td>23</td>
<td>Twenty three</td>
<td>48</td>
<td>Forty eight</td>
</tr>
<tr>
<td>24</td>
<td>Twenty four</td>
<td>49</td>
<td>Forty nine</td>
</tr>
<tr>
<td>25</td>
<td>Twenty five</td>
<td>50</td>
<td>Fifty</td>
</tr>
</tbody>
</table>
### Activity 2

Read and trace the numbers 51–100 in words.

<table>
<thead>
<tr>
<th>In figures</th>
<th>In words</th>
<th>In figures</th>
<th>In words</th>
</tr>
</thead>
<tbody>
<tr>
<td>51</td>
<td>Fifty one</td>
<td>76</td>
<td>Seventy six</td>
</tr>
<tr>
<td>52</td>
<td>Fifty two</td>
<td>77</td>
<td>Seventy seven</td>
</tr>
<tr>
<td>53</td>
<td>Fifty three</td>
<td>78</td>
<td>Seventy eight</td>
</tr>
<tr>
<td>54</td>
<td>Fifty four</td>
<td>79</td>
<td>Seventy nine</td>
</tr>
<tr>
<td>55</td>
<td>Fifty five</td>
<td>80</td>
<td>Eighty</td>
</tr>
<tr>
<td>56</td>
<td>Fifty six</td>
<td>81</td>
<td>Eighty one</td>
</tr>
<tr>
<td>57</td>
<td>Fifty seven</td>
<td>82</td>
<td>Eighty two</td>
</tr>
<tr>
<td>58</td>
<td>Fifty eight</td>
<td>83</td>
<td>Eighty three</td>
</tr>
<tr>
<td>59</td>
<td>Fifty nine</td>
<td>84</td>
<td>Eighty four</td>
</tr>
<tr>
<td>60</td>
<td>Sixty</td>
<td>85</td>
<td>Eighty five</td>
</tr>
<tr>
<td>61</td>
<td>Sixty one</td>
<td>86</td>
<td>Eighty six</td>
</tr>
<tr>
<td>62</td>
<td>Sixty two</td>
<td>87</td>
<td>Eighty seven</td>
</tr>
<tr>
<td>63</td>
<td>Sixty three</td>
<td>88</td>
<td>Eighty eight</td>
</tr>
<tr>
<td>64</td>
<td>Sixty four</td>
<td>89</td>
<td>Eighty nine</td>
</tr>
<tr>
<td>65</td>
<td>Sixty five</td>
<td>90</td>
<td>Ninety</td>
</tr>
<tr>
<td>66</td>
<td>Sixty six</td>
<td>91</td>
<td>Ninety one</td>
</tr>
<tr>
<td>67</td>
<td>Sixty seven</td>
<td>92</td>
<td>Ninety two</td>
</tr>
<tr>
<td>68</td>
<td>Sixty eight</td>
<td>93</td>
<td>Ninety three</td>
</tr>
<tr>
<td>69</td>
<td>Sixty nine</td>
<td>94</td>
<td>Ninety four</td>
</tr>
<tr>
<td>70</td>
<td>Seventy</td>
<td>95</td>
<td>Ninety five</td>
</tr>
<tr>
<td>71</td>
<td>Seventy one</td>
<td>96</td>
<td>Ninety six</td>
</tr>
<tr>
<td>72</td>
<td>Seventy two</td>
<td>97</td>
<td>Ninety seven</td>
</tr>
<tr>
<td>73</td>
<td>Seventy three</td>
<td>98</td>
<td>Ninety eight</td>
</tr>
<tr>
<td>74</td>
<td>Seventy four</td>
<td>99</td>
<td>Ninety nine</td>
</tr>
<tr>
<td>75</td>
<td>Seventy five</td>
<td>100</td>
<td>Hundred</td>
</tr>
</tbody>
</table>

**Teacher’s Note**

Teacher should give more drill work for writing numbers 1–20, 21–50 and 51–100 in words.
## Exercise 2

### (1) Write the numbers in words:

<table>
<thead>
<tr>
<th>In figures</th>
<th>Numbers in words</th>
</tr>
</thead>
<tbody>
<tr>
<td>35</td>
<td>Thirty five</td>
</tr>
<tr>
<td>75</td>
<td></td>
</tr>
<tr>
<td>100</td>
<td></td>
</tr>
<tr>
<td>48</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td></td>
</tr>
<tr>
<td>93</td>
<td></td>
</tr>
<tr>
<td>67</td>
<td></td>
</tr>
<tr>
<td>89</td>
<td></td>
</tr>
<tr>
<td>47</td>
<td></td>
</tr>
<tr>
<td>79</td>
<td></td>
</tr>
</tbody>
</table>

### (2) Join the given numbers in figures with numbers in words:

<table>
<thead>
<tr>
<th>In figures</th>
<th>Numbers in words</th>
</tr>
</thead>
<tbody>
<tr>
<td>64</td>
<td>Forty</td>
</tr>
<tr>
<td>81</td>
<td>Fifty seven</td>
</tr>
<tr>
<td>40</td>
<td>Ninety six</td>
</tr>
<tr>
<td>32</td>
<td>Fifty nine</td>
</tr>
<tr>
<td>57</td>
<td>Twenty five</td>
</tr>
<tr>
<td>59</td>
<td>Sixty four</td>
</tr>
<tr>
<td>96</td>
<td>Eighty one</td>
</tr>
<tr>
<td>89</td>
<td>Thirty two</td>
</tr>
<tr>
<td>25</td>
<td>Seventy two</td>
</tr>
<tr>
<td>72</td>
<td>Eighty nine</td>
</tr>
</tbody>
</table>
NUMBERS UP TO 1000

Place value

Recognize the place value of a 3-digit number

When we add 1 more in 99, we get 100. Read as one hundred.

10 tens = 100.

100 is a first 3-digit number.

In place value chart we write it as:

<table>
<thead>
<tr>
<th>Hundreds</th>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Activity

Write the place value of each digit in the given numbers.

1. In 96 the place value of:
   - 9 is __tens__ and 6 is __ones__.

2. In 354 the place value of:
   - 3 is _____, 5 is _____ and 4 is ________.

Example 1: Count and write in hundreds, tens and ones.

<table>
<thead>
<tr>
<th>Hundreds</th>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>1</td>
<td>9</td>
</tr>
</tbody>
</table>

Six hundred ten nine

Six hundred nineteen = 619

Teacher’s Note

Teacher should help students to recognize the place value of 3-digit numbers and making 3-digit numbers by using different numerals.
(1) Count and write hundreds, tens and ones.

(2) Write the digits at their correct places.

<table>
<thead>
<tr>
<th>Number</th>
<th>Hundreds</th>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>208</td>
<td>2</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>180</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>370</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>605</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>347</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>800</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>990</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
(3) Count hundreds, tens, ones and write the number in the box.

1. Hundreds: 4
   Tens: 2
   Ones: 3
   Total: 423

2. 

3. 

4. 

5. 

Teacher’s Note
Teacher should use hand made abacus for the students in developing the concept of place values.
Identify the place value of a specific digit in a 3-digit number

Example: Identify the place value of encircled digit

3 4 5
The place value of 5 is 5 ones = 5

3 4 5
The place value of 4 is 4 tens = 40

3 4 5
The place value of 3 is 3 hundreds = 300

Exercise 4

Write the place value of the digits given in coloured box.

(1) 3 4 2
   4 Tens

(2) 9 4 6

(3) 9 6 4

(4) 5 7 0

(5) 1 8 9

(6) 5 0 1

(7) 3 3 3

(8) 5 0 0

(9) 8 3 5

(10) 6 9 8

Teacher’s Note
Teacher should help the students to identify place value of specific digit in 3-digit numbers
**Activity**

**Colour the smaller number red in each pair.**

1. \[24 \quad 28\] \[61 \quad 21\]
2. \[165 \quad 169\] \[184 \quad 149\]

**Exercise 5**

1. **Colour the box of smaller number.**
   - \[53 \quad 74\]
   - \[36 \quad 44\]
   - \[50 \quad 60\]
   - \[24 \quad 34\]
   - \[165 \quad 213\]
   - \[405 \quad 210\]
   - \[314 \quad 624\]
   - \[510 \quad 810\]

2. **Colour the box of greater number.**
   - \[36 \quad 14\]
   - \[25 \quad 46\]
   - \[78 \quad 96\]
   - \[64 \quad 54\]
   - \[213 \quad 423\]
   - \[167 \quad 314\]
   - \[210 \quad 123\]
   - \[718 \quad 218\]

3. **Colour the box of greater number blue and the smaller number red.**
   - \[26 \quad 70\]
   - \[13 \quad 65\]
   - \[36 \quad 81\]
   - \[42 \quad 12\]
   - \[29 \quad 79\]
   - \[63 \quad 50\]
   - \[84 \quad 24\]
   - \[93 \quad 56\]
   - \[412 \quad 360\]
   - \[210 \quad 910\]
   - \[244 \quad 356\]
   - \[112 \quad 402\]

**Teacher’s Note**

Teacher should help the students in comparing 2-digit and 3-digit numbers.
## NUMBERS

### (Place Value)

**Activity 1**  
Read numbers from 100 to 199

<p>| | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>101</td>
<td>102</td>
<td>103</td>
<td>104</td>
<td>105</td>
<td>106</td>
<td>107</td>
<td>108</td>
</tr>
<tr>
<td>110</td>
<td>111</td>
<td>112</td>
<td>113</td>
<td>114</td>
<td>115</td>
<td>116</td>
<td>117</td>
<td>118</td>
</tr>
<tr>
<td>120</td>
<td>121</td>
<td>122</td>
<td>123</td>
<td>124</td>
<td>125</td>
<td>126</td>
<td>127</td>
<td>128</td>
</tr>
<tr>
<td>130</td>
<td>131</td>
<td>132</td>
<td>133</td>
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</table>

**Activity 2**  
Read numbers from 900 to 999.

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<td>994</td>
<td>995</td>
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<td>998</td>
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</tbody>
</table>

**Teacher’s Note**  
Teacher should help the students to read and write numbers of 100–299, 300–399, 400–499,...,900–999.
Activity 3

Read and write the numbers.

201, 202, ____, ____, ____, ____, ____, ____, ____, 210
351, 352, ____, ____, ____, ____, ____, ____, ____, 360
411, ____, ____, ____, ____, ____, ____, ____, ____, 420
561, ____, ____, ____, ____, ____, ____, ____, ____, 570
721, ____, ____, ____, ____, ____, ____, ____, ____, 730
881, ____, ____, ____, ____, ____, ____, ____, ____, 890

Exercise 6

Write the missing numbers:

<table>
<thead>
<tr>
<th>300</th>
<th>301</th>
<th>__</th>
<th>303</th>
<th>__</th>
<th>__</th>
<th>306</th>
<th>__</th>
<th>__</th>
</tr>
</thead>
<tbody>
<tr>
<td>430</td>
<td>__</td>
<td>__</td>
<td>433</td>
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<td>__</td>
<td>436</td>
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<td>669</td>
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<td>683</td>
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<td>686</td>
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<td>748</td>
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<td>751</td>
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<td>777</td>
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<td>__</td>
<td>782</td>
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<td>816</td>
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<td>820</td>
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<td>894</td>
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<td>898</td>
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<td>902</td>
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<td>990</td>
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<td>__</td>
<td>__</td>
<td>995</td>
<td>__</td>
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</tr>
</tbody>
</table>

Teacher’s Note

Teacher should help the students to read and write the numbers up to 999.
Identify numbers given in ascending or descending order

Activity 1

Which one of the following given numbers are in ascending order?

8  23  100

100  23  8

23  100  8

73  42  21  9

9  21  42  73

42  21  9  73

132  112  182  142

182  142  132  112

112  132  142  182

Activity 2

Which one of the following given numbers are in descending order?

13  73  93

73  93  30

93  73  13

34  79  85  58

85  79  58  34

34  58  79  85

165  143  132  156

132  143  156  165

165  156  143  132

Teacher’s Note

Teacher should help the students to develop the concept of ascending order from smaller to bigger number and descending order from bigger to smaller number.
Exercise 7

(A) Tick (✓) the given set of numbers which are in ascending order:

1. 7 19 41 50
2. 45 58 74 92
3. 54 47 32 25
4. 100 104 111 120
5. 174 163 154 148
6. 224 250 216 232

(B) Cross (✗) the given set of numbers which are in descending order:

1. 65 57 88 49
2. 35 53 76 89
3. 94 72 61 50
4. 120 111 101 94
5. 321 382 365 397
6. 481 474 467 459
Count backward ten steps down from any given number

Example:
Count and write the numbers in ten steps down backward.

Solution:

Exercise 8

Count and write backward ten steps from the given number.

1. 80 79 78 77 76 75 74 73 72 71
2. 90
3. 85
4. 110
5. 220

Teacher’s Note: Teacher should use other examples for developing the concept of backward counting in ten steps down by given number.
Arrange numbers up to 999, written in mixed form, in increasing or decreasing order

**Activity 1** Arrange the given numbers in increasing order.

<table>
<thead>
<tr>
<th>Activity 1</th>
<th>Activity 2</th>
<th>Arrange the given numbers in decreasing order.</th>
</tr>
</thead>
<tbody>
<tr>
<td>73 45 59 64</td>
<td>131 129 145 118</td>
<td>91 78 45 82</td>
</tr>
<tr>
<td>45 59 64 73</td>
<td></td>
<td>91 82 78 45</td>
</tr>
</tbody>
</table>

**Activity 2** Arrange the given numbers in decreasing order.

<table>
<thead>
<tr>
<th>Activity 1</th>
<th>Activity 2</th>
<th>Arrange the given numbers in decreasing order.</th>
</tr>
</thead>
<tbody>
<tr>
<td>91 78 45 82</td>
<td>167 149 171 138</td>
<td>91 78 45 82</td>
</tr>
<tr>
<td>91 82 78 45</td>
<td></td>
<td>91 82 78 45</td>
</tr>
</tbody>
</table>

**Exercise 9** Arrange the given numbers in increasing and decreasing order.

**Increasing Order**  
| 36 41 19 56 | 180 163 131 190 |

**Decreasing Order**  
| 35 42 74 89 | 208 244 218 256 |

**Increasing Order**  
| 36 41 19 56 | 390 330 380 350 |

**Decreasing Order**  
| 35 42 74 89 | 483 428 455 419 |
COUNTING IN TENS AND HUNDREDS

Count and write in 10s (e.g. 10, 20, 30, ...).

Example: Count and read in tens.

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>70</td>
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<td>80</td>
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<td>100</td>
<td>110</td>
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<td>160</td>
<td>170</td>
<td>180</td>
<td>190</td>
<td>200</td>
<td>210</td>
</tr>
</tbody>
</table>

Exercise 10

Count in tens and write the missing numbers:

(1) 10, 30, 40, 60, 70
(2) 100, 120, 140, 150
(3) 250, 270, 290

Count and write in 100s (e.g. 100, 200, 300, ...).

Example: Count the numbers in hundreds and trace the numbers.

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>600</td>
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<td>100</td>
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<tr>
<td>900</td>
<td>800</td>
<td>700</td>
<td>600</td>
<td>500</td>
<td>400</td>
<td>300</td>
</tr>
</tbody>
</table>

Exercise 11

Count in hundreds and write the missing numbers.

100, ____, ____, ____, ____, 500

200, ____, ____, ____, ____, ____

500, ____, ____, ____, ____
Teacher’s Note

Teacher should help the students to identify the smallest and largest numbers in various given set of numbers.
Recognize that 1000 is one more than 999 and the first four digit number

**Activity**
Count and write the number.

<table>
<thead>
<tr>
<th>Hundreds</th>
<th>Tens</th>
<th>Ones</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Hundreds]</td>
<td>![Tens]</td>
<td>![Ones]</td>
<td>525</td>
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<tr>
<td>![Hundreds]</td>
<td>![Tens]</td>
<td>![Ones]</td>
<td>525</td>
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<td>![Hundreds]</td>
<td>![Tens]</td>
<td>![Ones]</td>
<td>525</td>
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<tr>
<td>![Hundreds]</td>
<td>![Tens]</td>
<td>![Ones]</td>
<td>525</td>
</tr>
</tbody>
</table>

When we add 1 more ones in 999, it makes 1000.

10 hundreds make One thousand

We read one thousand and write as 1000

1000 is the first 4-digit number.

**Teacher’s Note**
Teacher should help the students to build the concept of 1000 is 1 more than 999 and it is first four digit number.
FRACTIONS
Recognize fraction as equal parts of a whole
Let rectangle piece of paper be cut into equal parts.

Equal parts of a whole

\[
\text{Whole} = \frac{\text{Two equal parts}}{\text{Four equal parts}}
\]

A fraction shows part of a whole when the whole is divided into equal parts.

Activity 1
Tick (✔️) for equal parts and cross (❌) for unequal parts of the following:

Activity 2
Write how many equal parts of a whole are in the following figures.

Teacher’s Note
Teacher should show different objects and cut them into equal parts to explain fractions.
Identify half, one third and quarter with the help of objects and figures without writing $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$

**One-half**

If we divide an object into two equal parts, then each of the part is called **one-half** of it.

![Half Circle](image)

This circle is divided into 2 equal parts. One of the two equal parts is called a one-half of the circle.

**One-third**

If we divide an object into three equal parts, then each of its part is called **one-third** of it.

![Third Circle](image)

This circle is divided into 3 equal parts. Each part is one-third of the whole circle.

**One-fourth**

If we divide an object into four equal parts, then each of its part is called **one-fourth** of it.

![Fourth Circle](image)

This circle is divided into four equal parts. Each part is one-fourth of the whole circle.
Look at the figures.

Activity 1
Colour one-half of each of the following.

Activity 2
Colour the one-third of the given objects.

Activity 3
Colour the one-fourth or quarter of each figure.
Represent half, one third and quarter in numerical form as \( \frac{1}{2}, \frac{1}{3}, \frac{1}{4} \).

**Numerical form of one-half**

*Numerically we write one-half as \( \frac{1}{2} \).*

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

\( \frac{1}{2} \) means half.

The coloured part of the whole figure is \( \frac{1}{2} \).

The uncoloured part is also \( \frac{1}{2} \) of the whole figure.

**One out of two equal parts is one-half.**

**Activity** Colour red \( \frac{1}{2} \) of each shape.

**Numerical form of one-third**

*Numerically we write one-third as \( \frac{1}{3} \).*

\[ \frac{1}{3} \]

\( \frac{1}{3} \) means 1 part of equal three parts of a whole figure.

**One out of three equal parts is one-third.**

**Activity** Colour green \( \frac{1}{3} \) of each shape.

Teacher’s Note: Teacher should explain that \( \frac{1}{2} \) means shaded part of 2 equal parts and \( \frac{1}{3} \) means one shaded part of 3 equal parts of a whole figure.
Numerical form of a quarter

*Numerically we write one-fourth as \( \frac{1}{4} \).*

\[
\begin{array}{ccc}
\frac{1}{4} & \frac{1}{4} & \frac{1}{4} \\
\frac{1}{4} & \frac{1}{4} & \frac{1}{4}
\end{array}
\]

\( \frac{1}{4} \) means one part of four equal parts of a whole figure

One out of four equal parts is equal to *one-fourth* or *a quarter*.

Activity

Colour blue \( \frac{1}{4} \) of each shape.

![Colour the equal parts of a given figure to match a given fraction](image)

Teacher's Note

Teacher should explain that \( \frac{1}{4} \) means one part of 4 equal parts of a whole figure.
Recognize and name unit fractions up to $\frac{1}{12}$

Look at the equal parts and read the fraction which is coloured.

<table>
<thead>
<tr>
<th>Shape</th>
<th>Equal parts</th>
<th>Fraction</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Shape 1" /></td>
<td>2</td>
<td>one-half</td>
</tr>
<tr>
<td><img src="image2.png" alt="Shape 2" /></td>
<td>3</td>
<td>one-third</td>
</tr>
<tr>
<td><img src="image3.png" alt="Shape 3" /></td>
<td>4</td>
<td>one-fourth</td>
</tr>
<tr>
<td><img src="image4.png" alt="Shape 4" /></td>
<td>5</td>
<td>one-fifth</td>
</tr>
<tr>
<td><img src="image5.png" alt="Shape 5" /></td>
<td>6</td>
<td>one-sixth</td>
</tr>
<tr>
<td><img src="image6.png" alt="Shape 6" /></td>
<td>7</td>
<td>one-seventh</td>
</tr>
<tr>
<td><img src="image7.png" alt="Shape 7" /></td>
<td>8</td>
<td>one-eighth</td>
</tr>
<tr>
<td><img src="image8.png" alt="Shape 8" /></td>
<td>9</td>
<td>one-ninth</td>
</tr>
<tr>
<td><img src="image9.png" alt="Shape 9" /></td>
<td>10</td>
<td>one-tenth</td>
</tr>
<tr>
<td><img src="image10.png" alt="Shape 10" /></td>
<td>11</td>
<td>one-eleventh</td>
</tr>
<tr>
<td><img src="image11.png" alt="Shape 11" /></td>
<td>12</td>
<td>one-twelfth</td>
</tr>
</tbody>
</table>

When a whole figure is divided into equal parts then one part out of all parts is called unit fraction.

Teacher’s Note: Teacher should perform the above activity in groups of students by using paper strips and other regular objects.
(A) Tick the correct unit fraction represented by coloured portion.

1. \(\frac{1}{2}\)  \(\frac{1}{7}\)  \(\frac{1}{8}\)

2. \(\frac{1}{7}\)  \(\frac{1}{9}\)  \(\frac{1}{12}\)

3. \(\frac{1}{3}\)  \(\frac{1}{7}\)  \(\frac{1}{4}\)

4. \(\frac{1}{8}\)  \(\frac{1}{6}\)  \(\frac{1}{5}\)

(B) Colour the given unit fractions.

1. \(\frac{1}{3}\)

2. \(\frac{1}{4}\)

3. \(\frac{1}{8}\)

4. \(\frac{1}{2}\)

5. \(\frac{1}{6}\)

6. \(\frac{1}{10}\)
Recognize fractions like two third, three fourth, four fifth and so on using $\frac{2}{3}, \frac{3}{4}, \ldots$

Look at the equal parts and read the fraction represented by coloured portion.

<table>
<thead>
<tr>
<th>Shape</th>
<th>Equal Parts</th>
<th>Coloured Parts</th>
<th>Fraction</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Pie Chart" /></td>
<td>3</td>
<td>2</td>
<td>two-third</td>
</tr>
<tr>
<td><img src="image2.png" alt="Rectangular Grid" /></td>
<td>4</td>
<td>3</td>
<td>three-fourth</td>
</tr>
<tr>
<td><img src="image3.png" alt="Pie Chart" /></td>
<td>5</td>
<td>4</td>
<td>Four-fifth</td>
</tr>
<tr>
<td><img src="image4.png" alt="Rectangular Grid" /></td>
<td>6</td>
<td>5</td>
<td>five-sixth</td>
</tr>
</tbody>
</table>

**Activity**

Tick the right fraction represented by the shaded portion.

1. ![Shaded Fraction](image5.png) $\frac{2}{3}$ $\frac{3}{4}$ $\frac{1}{5}$
2. ![Shaded Fraction](image6.png) $\frac{4}{9}$ $\frac{3}{4}$ $\frac{7}{9}$
3. ![Shaded Fraction](image7.png) $\frac{3}{9}$ $\frac{5}{7}$ $\frac{4}{5}$
4. ![Shaded Fraction](image8.png) $\frac{1}{10}$ $\frac{5}{6}$ $\frac{1}{12}$
Exercise 14

Match the picture with correct fraction.

1. \(\frac{9}{10}\)
2. \(\frac{3}{4}\)
3. \(\frac{2}{3}\)
4. \(\frac{4}{5}\)
5. \(\frac{5}{6}\)
6. \(\frac{7}{8}\)
7. \(\frac{6}{7}\)
ADDITION

Addition of 2-digit numbers (with carrying)
Add ones and ones

We remember, when we add two numbers, we get their sum.

Addition is to find the sum by combining two or more things.

Activity 1  Count and add number of apples in given boxes.

Activity 2  Count and add the number then the sum of objects in given boxes.

Teacher’s Note  Teacher will help the students to revise the addition sums by adding ones and ones by using different objects. For example pencils, chalks, notebooks, desks etc. in the classroom.
Activity 3

Match the answer and colour them as given in box.

Solve: 9 + 2 = 11

9 + 2 = 11
9 + 8 = 17
8 + 7 = 15
7 + 3 = 10
5 + 9 = 14
6 + 4 = 10

Exercise 15

(1) Add:

(1) 7 + 3 = 10
(2) 8 + 2 =
(3) 9 + 5 =
(4) 8 + 4 =
(5) 5 + 8 =
(6) 6 + 6 =

(2) Add and fill in the boxes.

(1) 7 + 7 = 14
(2) 4 + 9 =
(3) 5 + 5 =
(4) 2 + 9 =
Add ones and 2-digit numbers with carrying

Example 1: Add 17 and 4.

Solution:

\[
\begin{array}{c|c}
\text{Tens} & \text{Ones} \\
\hline
1 & 7 \\
0 & 4 \\
\hline
+ & + \\
\hline
\end{array}
\]

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

Step 1:
Add 7 + 4 = 11
Write 1 at ones place and carry 1 ten to tens place.

Step 2:
Add 1 + 1 = 2
Write 2 at tens place.
Means the 17 + 4 = 21

Exercise 16

(A) Add:

1. \[
\begin{array}{c|c}
\text{Tens} & \text{Ones} \\
\hline
8 & 2 \\
+ & 9 \\
\hline
9 & 1 \\
\end{array}
\]

2. \[
\begin{array}{c|c}
\text{Tens} & \text{Ones} \\
\hline
3 & 6 \\
+ & 5 \\
\hline
\end{array}
\]

3. \[
\begin{array}{c|c}
\text{Tens} & \text{Ones} \\
\hline
4 & 7 \\
+ & 7 \\
\hline
\end{array}
\]

4. \[
\begin{array}{c|c}
\text{Tens} & \text{Ones} \\
\hline
6 & 6 \\
+ & 4 \\
\hline
\end{array}
\]

5. \[
\begin{array}{c|c}
\text{Tens} & \text{Ones} \\
\hline
4 & 9 \\
+ & 1 \\
\hline
\end{array}
\]

6. \[
\begin{array}{c|c}
\text{Tens} & \text{Ones} \\
\hline
7 & 6 \\
+ & 8 \\
\hline
\end{array}
\]

7. \[
\begin{array}{c|c}
\text{Tens} & \text{Ones} \\
\hline
5 & 6 \\
+ & 9 \\
\hline
\end{array}
\]

8. \[
\begin{array}{c|c}
\text{Tens} & \text{Ones} \\
\hline
4 & 8 \\
+ & 6 \\
\hline
\end{array}
\]

Teacher’s Note
Teacher will help the students to understand the addition process of 2-digit number with ones by using available objects like stones, match sticks, chalks etc.
Add 2 digit numbers and 2 digit numbers with carrying

Example: Add 35 and 47.

Solution:

<table>
<thead>
<tr>
<th>Ten</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>+ 4</td>
<td>7</td>
</tr>
</tbody>
</table>

Step 1

Add 5 + 7 = 12 ones
Write 2 at ones place and carry 1 to tens place.

Step 2   Finally add tens

<table>
<thead>
<tr>
<th>T</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>+ 4</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>2</td>
</tr>
</tbody>
</table>

Add tens 1 + 3 + 4 = 8
write 8 below the tens place.

Exercise 17

(A) Add:

1. 18 + 12
2. 25 + 19
3. 35 + 46
4. 68 + 24
5. 39 + 58
6. 47 + 28
7. 44 + 47
8. 76 + 14

(B) Add and write sum in the boxes:

1. 19 + 26 =
2. 17 + 23 =
3. 63 + 18 =
4. 57 + 34 =

Teacher’s Note
Teacher will help the students to understand the addition process of 2-digit numbers with 2-digit numbers by using lines match sticks, chalks and other available objects.
Solve real life problems, involving addition of 2-digit numbers with carrying

**Example 1:** There are 18 eggs in one bucket and 9 eggs in another bucket. How many eggs are there in both buckets?

**Solution:**

One bucket contains 18 eggs

An other bucket contains 9 eggs

Total 27 eggs

In a weekly test Rasheeda secured 28 marks in English and 18 marks in Mathematics. Find the total number of marks?

Hira picked 49 flowers and Hina picked 37 flowers. How many flowers did they pick in all?

Zohaib has 65 caryans, he buys 18 more. How many caryans does he have now?

In a cricket test match Naeem scores 64 runs in first inning and 27 runs in second inning. Find the total number of runs scored by Naeem?

Anwar sells 22 eggs on Saturday and 29 eggs on Sunday. How many eggs does he sell in both days?

There are 36 sharpeners in one packet and 27 sharpeners are in another packet. How many sharpeners are there in both packets?

Sania has Rs 52, her father gives her 19 more rupees. How many rupees does Sania have now?
Addition of 3-digit numbers without carrying

Add 3-digit numbers and ones without carrying

Activity

Add 123 and 6.

Solution:

\[
\begin{array}{c}
\text{T} \\
123 \\
\end{array} + \begin{array}{c}
\text{T} \\
6 \\
\end{array} = \begin{array}{c}
\text{T} \\
129 \\
\end{array}
\]

Exercise 19

(A) Add:

\[
\begin{array}{c}
\text{H} \text{ T} \text{ O} \\
195 \\
\end{array} + \begin{array}{c}
\text{H} \\
3 \\
\end{array} = \begin{array}{c}
\text{H} \text{ T} \text{ O} \\
208 \\
\end{array}
\]

\[
\begin{array}{c}
\text{H} \text{ T} \text{ O} \\
174 \\
\end{array} + \begin{array}{c}
\text{H} \\
4 \\
\end{array} = \begin{array}{c}
\text{H} \text{ T} \text{ O} \\
178 \\
\end{array}
\]

\[
\begin{array}{c}
\text{H} \text{ T} \text{ O} \\
363 \\
\end{array} + \begin{array}{c}
\text{H} \\
6 \\
\end{array} = \begin{array}{c}
\text{H} \text{ T} \text{ O} \\
429 \\
\end{array}
\]

\[
\begin{array}{c}
\text{H} \text{ T} \text{ O} \\
437 \\
\end{array} + \begin{array}{c}
\text{H} \\
2 \\
\end{array} = \begin{array}{c}
\text{H} \text{ T} \text{ O} \\
439 \\
\end{array}
\]

\[
\begin{array}{c}
\text{H} \text{ T} \text{ O} \\
531 \\
\end{array} + \begin{array}{c}
\text{H} \\
7 \\
\end{array} = \begin{array}{c}
\text{H} \text{ T} \text{ O} \\
602 \\
\end{array}
\]

\[
\begin{array}{c}
\text{H} \text{ T} \text{ O} \\
710 \\
\end{array} + \begin{array}{c}
\text{H} \\
9 \\
\end{array} = \begin{array}{c}
\text{H} \text{ T} \text{ O} \\
719 \\
\end{array}
\]

\[
\begin{array}{c}
\text{H} \text{ T} \text{ O} \\
632 \\
\end{array} + \begin{array}{c}
\text{H} \\
7 \\
\end{array} = \begin{array}{c}
\text{H} \text{ T} \text{ O} \\
709 \\
\end{array}
\]

\[
\begin{array}{c}
\text{H} \text{ T} \text{ O} \\
216 \\
\end{array} + \begin{array}{c}
\text{H} \\
1 \\
\end{array} = \begin{array}{c}
\text{H} \text{ T} \text{ O} \\
217 \\
\end{array}
\]

(B) Add and write the sum in the boxes:

\[
(1) \ 100 + 2 = \]

\[
(2) \ 102 + 3 = \]

\[
(3) \ 305 + 4 = \]

\[
(4) \ 100 + 4 = \]

\[
(5) \ 601 + 7 = \]

\[
(6) \ 702 + 6 = \]
Add 3-digit numbers and 2-digit numbers without carrying

Example: Add 322 and 34.

Solution:

\[
\begin{array}{c}
\text{H} \\
\text{T} \\
\text{O} \\
3 \\
2 \\
2 \\
+ \\
3 \\
4 \\
\hline
3 \\
5 \\
6
\end{array}
\]

With the help of abacus.

\[
\begin{array}{c}
\text{H} \\
\text{T} \\
\text{O} \\
\hline
\text{H} \\
\text{T} \\
\text{O} \\
\hline
\end{array}
\]

Thus \(322 + 34 = 356\)

Exercise 20

(A) Add:

1. \(125 + 14 = \underline{139}\)
2. \(375 + 23 = \underline{398}\)
3. \(285 + 13 = \underline{308}\)
4. \(211 + 37 = \underline{248}\)
5. \(289 + 10 = \underline{309}\)
6. \(331 + 68 = \underline{409}\)
7. \(700 + 99 = \underline{799}\)
8. \(432 + 44 = \underline{476}\)

(B) Tick (✓) the correct answer and cross (✗) the wrong answer:

1. \(119 + 50 = 159\) ✓
2. \(237 + 22 = 359\) ✗
3. \(703 + 20 = 723\) ✓
Add 3-digit numbers and 3-digit numbers without carrying

Example: Add 346 and 143.

Solution:

\[
\begin{array}{c}
\text{H} \\
3 \\
\text{T} \\
4 \\
\text{O} \\
6 \\
+ \\
1 \\
\text{T} \\
4 \\
\text{O} \\
3 \\
\hline \\
\text{H} \\
4 \\
\text{T} \\
8 \\
\text{O} \\
9 \\
\end{array}
\]

Exercise 21

Find the sum:

1. \( \begin{array}{c}
\text{H} \\
1 \\
\text{T} \\
0 \\
\text{O} \\
8 \\
+ \\
1 \\
\text{T} \\
0 \\
\text{O} \\
0 \\
\hline \\
\text{H} \\
2 \\
\text{T} \\
1 \\
\text{O} \\
8 \\
\end{array} \)

2. \( \begin{array}{c}
\text{H} \\
3 \\
\text{T} \\
0 \\
\text{O} \\
6 \\
+ \\
2 \\
\text{T} \\
0 \\
\text{O} \\
0 \\
\hline \\
\text{H} \\
5 \\
\text{T} \\
3 \\
\text{O} \\
6 \\
\end{array} \)

3. \( \begin{array}{c}
\text{H} \\
2 \\
\text{T} \\
3 \\
\text{O} \\
0 \\
+ \\
2 \\
\text{T} \\
0 \\
\text{O} \\
5 \\
\hline \\
\text{H} \\
4 \\
\text{T} \\
3 \\
\text{O} \\
5 \\
\end{array} \)

4. \( \begin{array}{c}
\text{H} \\
1 \\
\text{T} \\
8 \\
\text{O} \\
3 \\
+ \\
1 \\
\text{T} \\
1 \\
\text{O} \\
4 \\
\hline \\
\text{H} \\
2 \\
\text{T} \\
9 \\
\text{O} \\
7 \\
\end{array} \)

5. \( \begin{array}{c}
\text{H} \\
2 \\
\text{T} \\
1 \\
\text{O} \\
5 \\
+ \\
1 \\
\text{T} \\
5 \\
\text{O} \\
1 \\
\hline \\
\text{H} \\
3 \\
\text{T} \\
6 \\
\text{O} \\
6 \\
\end{array} \)

6. \( \begin{array}{c}
\text{H} \\
3 \\
\text{T} \\
3 \\
\text{O} \\
3 \\
+ \\
2 \\
\text{T} \\
2 \\
\text{O} \\
2 \\
\hline \\
\text{H} \\
5 \\
\text{T} \\
5 \\
\text{O} \\
7 \\
\end{array} \)

7. \( \begin{array}{c}
\text{H} \\
5 \\
\text{T} \\
5 \\
\text{O} \\
0 \\
+ \\
3 \\
\text{T} \\
3 \\
\text{O} \\
0 \\
\hline \\
\text{H} \\
8 \\
\text{T} \\
8 \\
\text{O} \\
0 \\
\end{array} \)

8. \( \begin{array}{c}
\text{H} \\
3 \\
\text{T} \\
0 \\
\text{O} \\
2 \\
+ \\
5 \\
\text{T} \\
0 \\
\text{O} \\
0 \\
\hline \\
\text{H} \\
8 \\
\text{T} \\
0 \\
\text{O} \\
2 \\
\end{array} \)

9. \( \begin{array}{c}
\text{H} \\
7 \\
\text{T} \\
2 \\
\text{O} \\
5 \\
+ \\
1 \\
\text{T} \\
3 \\
\text{O} \\
4 \\
\hline \\
\text{H} \\
8 \\
\text{T} \\
5 \\
\text{O} \\
9 \\
\end{array} \)

10. \( \begin{array}{c}
\text{H} \\
6 \\
\text{T} \\
7 \\
\text{O} \\
3 \\
+ \\
2 \\
\text{T} \\
2 \\
\text{O} \\
5 \\
\hline \\
\text{H} \\
8 \\
\text{T} \\
1 \\
\text{O} \\
8 \\
\end{array} \)

11. \( \begin{array}{c}
\text{H} \\
5 \\
\text{T} \\
7 \\
\text{O} \\
6 \\
+ \\
1 \\
\text{T} \\
0 \\
\text{O} \\
3 \\
\hline \\
\text{H} \\
6 \\
\text{T} \\
8 \\
\text{O} \\
9 \\
\end{array} \)

12. \( \begin{array}{c}
\text{H} \\
8 \\
\text{T} \\
3 \\
\text{O} \\
7 \\
+ \\
1 \\
\text{T} \\
6 \\
\text{O} \\
2 \\
\hline \\
\text{H} \\
9 \\
\text{T} \\
9 \\
\text{O} \\
9 \\
\end{array} \)
Solve real life problems, involving addition of 3-digit numbers, without carrying

Example: Adil buys 242 yellow balloons and his father gave 123 green balloons more. How many balloons had he in all?

Solution

\[
\begin{array}{c}
\text{Yellow balloons} & 242 \\
\text{Green balloons} & +123 \\
\text{Total} & 365 \quad \text{Or} \quad 242 + 123 = 365
\end{array}
\]

Add:

(1) One shelf contains \(215\) Story books

Another shelf contains \(+271\) Story books

Both shelves contain = 

(2) One jar contains \(153\) toffees

another jar contains \(+244\) toffees

Both jars contain =

(3) Aasma has 331 picture cards. Her sister has 625 picture cards. How many picture cards do both the sisters have in all?

(4) A shopkeeper purchased 523 large kites and 113 kites of medium size. Find the total number of kites he purchased.

(5) There are 450 oranges in a basket and 140 oranges in another basket. How many oranges are there in all?

(6) Kanwal has Rs 130, she got Rs 115 from her mother. How much many rupees she has in all?

(7) There are 248 chocolates in one packet and 350 in another packet. Find the total number of chocolates?
Addition of 3-digit numbers with carrying

Add 3-digit numbers and ones with carrying of tens and hundreds

Example: Add 194 and 7

Solution:

\[
\begin{array}{c}
\text{H} \\
1 \\
\text{T} \\
9 \\
\text{O} \\
4 \\
+ \\
7 \\
\end{array}
\]

Step 1:
194 = 1 hundred, 9 tens and 4 ones.
Add ones \(4 + 7 = 11\) ones
11 ones = 1 ten and 1 one
write 1 at ones place and carry 1 to tens place

\[
\begin{array}{c}
\text{H} \\
1 \\
\text{T} \\
9 \\
\text{O} \\
4 \\
+ \\
7 \\
\end{array}
\] \quad \text{11}

Step 2:
Add tens \(9 + 1 = 10\) tens
write 0 at tens place and carry 1 to hundreds place

\[
\begin{array}{c}
\text{H} \\
1 \\
\text{T} \\
9 \\
\text{O} \\
4 \\
+ \\
7 \\
\end{array}
\] \quad \text{10 1}

Step 3:
Add hundreds \(1 + 1 = 2\) hundreds
Write 2 at hundred place

\[
\begin{array}{c}
\text{H} \\
1 \\
\text{T} \\
9 \\
\text{O} \\
4 \\
+ \\
7 \\
\end{array}
\] \quad \text{2 0 1}

\text{Hence} \quad 194 + 7 = 201 \quad \text{or} \quad 201

Teacher's Note: Teacher should help the students to understand the process step by step and make use of abacus or drawing lines.
Exercise 23

(A) Add:

(1) \[ \begin{array}{c}
H \\
T \\
O \\
3 \\
9 \\
7 \\
+ \\
8 \\
\end{array} \]

(2) \[ \begin{array}{c}
H \\
T \\
O \\
2 \\
9 \\
9 \\
+ \\
7 \\
\end{array} \]

(3) \[ \begin{array}{c}
H \\
T \\
O \\
4 \\
9 \\
6 \\
+ \\
9 \\
\end{array} \]

(4) \[ \begin{array}{c}
H \\
T \\
O \\
3 \\
9 \\
6 \\
+ \\
7 \\
\end{array} \]

(5) \[ \begin{array}{c}
H \\
T \\
O \\
6 \\
9 \\
8 \\
+ \\
5 \\
\end{array} \]

(6) \[ \begin{array}{c}
H \\
T \\
O \\
7 \\
9 \\
7 \\
+ \\
7 \\
\end{array} \]

(7) \[ \begin{array}{c}
H \\
T \\
O \\
8 \\
9 \\
9 \\
+ \\
7 \\
\end{array} \]

(8) \[ \begin{array}{c}
H \\
T \\
O \\
4 \\
9 \\
4 \\
+ \\
8 \\
\end{array} \]

(9) \[ \begin{array}{c}
H \\
T \\
O \\
3 \\
9 \\
5 \\
+ \\
6 \\
\end{array} \]

(10) \[ \begin{array}{c}
H \\
T \\
O \\
5 \\
9 \\
3 \\
+ \\
7 \\
\end{array} \]

(11) \[ \begin{array}{c}
H \\
T \\
O \\
9 \\
4 \\
9 \\
+ \\
9 \\
\end{array} \]

(12) \[ \begin{array}{c}
H \\
T \\
O \\
5 \\
9 \\
1 \\
+ \\
9 \\
\end{array} \]

(B) Add and fill the boxes:

(1) \[ \begin{array}{c}
2 \\
9 \\
2 \\
+ \\
8 \\
\end{array} = \begin{array}{c}
\ \\
\ \\
\ \\
\ \\
\ \\
\end{array} \]

(2) \[ \begin{array}{c}
3 \\
9 \\
7 \\
+ \\
6 \\
\end{array} = \begin{array}{c}
\ \\
\ \\
\ \\
\ \\
\ \\
\end{array} \]

(3) \[ \begin{array}{c}
8 \\
9 \\
6 \\
+ \\
4 \\
\end{array} = \begin{array}{c}
\ \\
\ \\
\ \\
\ \\
\ \\
\end{array} \]

(4) \[ \begin{array}{c}
5 \\
9 \\
9 \\
+ \\
9 \\
\end{array} = \begin{array}{c}
\ \\
\ \\
\ \\
\ \\
\ \\
\end{array} \]

(5) \[ \begin{array}{c}
3 \\
9 \\
8 \\
+ \\
7 \\
\end{array} = \begin{array}{c}
\ \\
\ \\
\ \\
\ \\
\ \\
\end{array} \]

(6) \[ \begin{array}{c}
4 \\
9 \\
4 \\
+ \\
7 \\
\end{array} = \begin{array}{c}
\ \\
\ \\
\ \\
\ \\
\ \\
\end{array} \]

(7) \[ \begin{array}{c}
5 \\
9 \\
8 \\
+ \\
9 \\
\end{array} = \begin{array}{c}
\ \\
\ \\
\ \\
\ \\
\ \\
\end{array} \]

(8) \[ \begin{array}{c}
4 \\
9 \\
8 \\
+ \\
9 \\
\end{array} = \begin{array}{c}
\ \\
\ \\
\ \\
\ \\
\ \\
\end{array} \]

(9) \[ \begin{array}{c}
4 \\
9 \\
7 \\
+ \\
5 \\
\end{array} = \begin{array}{c}
\ \\
\ \\
\ \\
\ \\
\ \\
\end{array} \]

(10) \[ \begin{array}{c}
5 \\
9 \\
5 \\
+ \\
5 \\
\end{array} = \begin{array}{c}
\ \\
\ \\
\ \\
\ \\
\ \\
\end{array} \]
Add 3-digit numbers and 2-digit numbers with carrying of tens and hundreds

**Example:** Add 196 and 45.

**Solution:**

\[
\begin{array}{c c c}
\text{H} & \text{T} & \text{O} \\
1 & 9 & 6 \\
+ & 4 & 5 \\
\hline
1 & 1 & 1 \\
\end{array}
\]

Step 1:
196 = 1 hundred, 9 tens and 6 ones
45 = 4 tens and 5 ones
Add ones: \(6 + 5 = 11\) ones
write 1 at ones place and carry 1 to tens place

\[
\begin{array}{c c c}
\text{H} & \text{T} & \text{O} \\
1 & 9 & 6 \\
+ & 4 & 5 \\
\hline
1 & 4 & 1 \\
\end{array}
\]

Step 2:
Now add tens \(9 + 4 + 1 = 14\) tens
14 tens = 1 hundred and 4 tens.
Write 4 at tens place and carry 1 to hundreds place.

\[
\begin{array}{c c c}
\text{H} & \text{T} & \text{O} \\
1 & 9 & 6 \\
+ & 4 & 5 \\
\hline
2 & 4 & 1 \\
\end{array}
\]

Step 3:
Now add hundreds
1 + 1 = 2 hundreds
Or \(196 + 45 = 241\)

---

**Exercise 24**

(A) Find the sum of following:

1. \[
\begin{array}{c c c}
\text{H} & \text{T} & \text{O} \\
1 & 9 & 5 \\
+ & 3 & 9 \\
\hline
2 & 3 & 4 \\
\end{array}
\]
2. \[
\begin{array}{c c c}
\text{H} & \text{T} & \text{O} \\
2 & 8 & 7 \\
+ & 3 & 7 \\
\hline
\end{array}
\]
3. \[
\begin{array}{c c c}
\text{H} & \text{T} & \text{O} \\
6 & 5 & 4 \\
+ & 6 & 8 \\
\hline
\end{array}
\]
4. \[
\begin{array}{c c c}
\text{H} & \text{T} & \text{O} \\
3 & 5 & 8 \\
+ & 7 & 6 \\
\hline
\end{array}
\]
5. \[
\begin{array}{c c c}
\text{H} & \text{T} & \text{O} \\
4 & 9 & 9 \\
+ & 5 & 5 \\
\hline
\end{array}
\]
6. \[
\begin{array}{c c c}
\text{H} & \text{T} & \text{O} \\
4 & 9 & 3 \\
+ & 1 & 8 \\
\hline
\end{array}
\]
7. \[
\begin{array}{c c c}
\text{H} & \text{T} & \text{O} \\
9 & 9 & 9 \\
+ & 4 & 1 \\
\hline
\end{array}
\]
8. \[
\begin{array}{c c c}
\text{H} & \text{T} & \text{O} \\
8 & 4 & 5 \\
+ & 8 & 7 \\
\hline
\end{array}
\]
9. \[
\begin{array}{c c c}
\text{H} & \text{T} & \text{O} \\
7 & 8 & 5 \\
+ & 2 & 8 \\
\hline
\end{array}
\]
10. \[
\begin{array}{c c c}
\text{H} & \text{T} & \text{O} \\
6 & 6 & 7 \\
+ & 3 & 6 \\
\hline
\end{array}
\]
11. \[
\begin{array}{c c c}
\text{H} & \text{T} & \text{O} \\
8 & 8 & 2 \\
+ & 3 & 8 \\
\hline
\end{array}
\]
12. \[
\begin{array}{c c c}
\text{H} & \text{T} & \text{O} \\
7 & 9 & 2 \\
+ & 9 & 9 \\
\hline
\end{array}
\]
Add 3-digit numbers and 3-digit numbers with carrying of tens and hundreds

Example 1: Add 234 and 679.

Solution:

Step 1: First add the ones.

\[
\begin{array}{c}
\text{Tens} \\
\text{O} \\
4 \text{ + } 9 = 13 \text{ ones}
\end{array}
\]
Write 3 in ones column.
Carry 1 to tens column.

Step 2: Next add the tens.

\[
\begin{array}{c}
\text{Tens} \\
\text{T} \\
1 \text{ + } 3 \text{ + } 7 = 11 \text{ tens}
\end{array}
\]
Write 1 in tens column.
Carry 1 to hundreds place.

Step 3: Add hundreds in the last.

\[
\begin{array}{c}
\text{Hundreds} \\
\text{H} \\
1 \text{ + } 2 \text{ + } 6 = 9
\end{array}
\]
Write 9 in hundreds column.

Thus

\[
\begin{array}{c}
\text{H} \\
2 \text{ + } 3 \text{ + } 6 = 9
\end{array}
\]

Or \(234 \text{ + } 679 = 913\)

Example 2: Add 234 and 386

Solution:

\[
\begin{array}{c}
\text{H} \\
2 \text{ + } 3 \text{ + } 3 = 8
\end{array}
\]

Or \(234 \text{ + } 386 = 620\)
Add:

(1) 5 6 5  
+3 6 9  
_______  

(2) 2 8 7  
+3 2 7  
_______  

(3) 3 9 5  
+3 7 8  
_______  

(4) 7 2 9  
+1 7 5  
_______  

(5) 7 7 7  
+1 9 9  
_______  

(6) 5 5 5  
+3 9 5  
_______  

(7) 6 3 3  
+2 6 7  
_______  

(8) 4 6 8  
+3 3 8  
_______  

(9) 3 1 9  
+5 9 1  
_______  

(10) 3 9 2  
+5 8 9  
_______  

(11) 6 6 3  
+2 5 8  
_______  

(12) 7 3 1  
+1 7 9  
_______  

Exercise 25

Unit 2  NUMBER OPERATIONS  (Addition of 3-digit numbers)
Solve real life problems with carrying of tens and hundreds

Example 1:
Salma reads 318 pages of a story book in the first week and 219 pages of another story book in the second week. Find the total number of pages read by her.

Solution:

Salma reads
In first week  318 pages
In second week + 219 pages
Total  537 pages

Example 2:
Ali’s father earns 485 rupees on Monday and 466 rupees on Tuesday. How much money he earned in two days?

Solution:

Ali’s father earns
On Monday  485 rupees
On Tuesday + 466 rupees
Total  951 rupees

Teacher’s Note
Teacher should help the students in solving daily life problems and encourage the students to make their own problems.
(1) Sadia used 159 red and 244 black buttons for making a design. How many buttons did she use?

(2) A shopkeeper sold 376 litres of milk in first week and 465 litres of milk in second week. How many litres of milk did he sell?

(3) Farzana spent Rs 155 to purchase books and Rs 147 on colour pencils. Find the total amount she spent.

(4) Bisma has 268 computer CD’s and her brother has 153 computer CD’s. How many CD’s they both have altogether?

(5) The price of bat is Rs 395 and the price of ball is Rs 127. What is the total price of both bat and ball altogether?

(6) There are 289 books on one shelf and 372 books on the other. How many books are there on both shelves?

(7) Ali has Rs 586, he got Rs 479 from his brother. How many rupees he has now?

(8) Adnan has collected 354 stamps and his sister has 259 stamps. How many stamps they both have altogether?
Teacher’s Note
Teacher should explain that if we add two numbers in any order, we get the same answer.

**NUMBER OPERATIONS**

**COMMUTATIVE PROPERTY**
Verify commutative property with respect to addition (sum should not exceed 100)

Look at this picture of balloons. The boy has 2 pink balloons in his left hand and 3 blue balloons in his right hand. He has total \((2 + 3 = 5)\) balloons in both hands.

He now exchange the position of balloons. He has 3 blue balloons in his left hand, 2 pink balloons in his right hand. Again he has total 5 balloons \((3 + 2 = 5)\) in his both hands.

In either case the total is 5. This shows that \(2 + 3 = 3 + 2\)

**Activity 1** Find the total number of mangoes.

\[
\begin{align*}
4 & \quad + \quad 5 = \quad 9 & & \text{or} & & 5 & \quad + \quad 4 = \quad 9 \\
\end{align*}
\]

Hence: \(4 + 5 = 5 + 4\)

Hence the sum of two numbers added in any order, their sum remains the same. We say that addition is commutative.
Example 1: Add and verify.

\[ 12 + 27 = \boxed{} = 27 + 12 \]

Solution: \[ 12 + 27 = \boxed{39} = 27 + 12 \]

Hence \[ 12 + 7 = 27 + 12 \]

Exercise 27

(A) Verify commutative property of addition:

(1) \[
\begin{array}{c|c|c}
\text{3} & +4 & \text{4} \\
\hline
\text{+4} & \text{+3} & \\
\end{array}
\]

Hence \(3 + 4 = 4 + 3\)

(2) \[
\begin{array}{c|c|c}
\text{7} & +2 & \text{2} \\
\hline
\text{+2} & \text{+7} & \\
\end{array}
\]

Hence \(\boxed{} + \boxed{} = \boxed{} + \boxed{}\)

(3) \[
\begin{array}{c|c|c}
\text{5} & +3 & \text{3} \\
\hline
\text{+3} & \text{+5} & \\
\end{array}
\]

Hence \(\boxed{} + \boxed{} = \boxed{} + \boxed{}\)

(B) Verify:

(1) \[ 8 + 2 = 2 + 8 \]
(2) \[ 9 + 1 = 1 + 9 \]
(3) \[ 28 + 30 = 30 + 28 \]
(4) \[ 24 + 36 = 36 + 24 \]
(5) \[ 42 + 38 = 38 + 42 \]
(6) \[ 40 + 50 = 50 + 40 \]
(7) \[ 45 + 35 = 35 + 45 \]
(8) \[ 31 + 49 = 49 + 31 \]
SUBTRACTION
Subtract ones from 2-digit numbers with borrowing

We have already learnt the process of subtraction in class 1.

Subtraction means to take away.

Example: Subtract 7 from 23.

Solution: 23 has 2 tens and 3 ones and 7 has 7 ones

Step 1: Subtraction of ones:
Since 3 is less than 7, 7 ones cannot be taken away from 3 ones.
Borrow 1 ten and convert it into 10 ones and add 3 in it. \(10 + 3 = 13\)
Now subtract 7 ones from 13 ones.
13 – 7 = 6 We get 6 ones.

Step 2: Subtraction of tens:
After borrowing, the digit left on tens place is 1
Hence, \(23 - 7 = 16\)

Exercise 28

Find the subtraction:

1. \[
\begin{array}{c}
T \\
3 \\
- \ \\
O \\
7 \\
- \ \\
\end{array}
\begin{array}{c}
T \\
4 \\
- \ \\
O \\
3 \\
- \ \\
\end{array}
\begin{array}{c}
T \\
6 \\
- \ \\
O \\
1 \\
- \ \\
\end{array}
\begin{array}{c}
T \\
7 \\
- \ \\
O \\
4 \\
- \ \\
\end{array}
\begin{array}{c}
T \\
8 \\
- \ \\
O \\
5 \\
- \ \\
\end{array}
\begin{array}{c}
T \\
3 \\
- \ \\
O \\
0 \\
- \ \\
\end{array}
\]

Teacher’s Note: Teacher should use concrete objects like paper strip or sticks etc. to explain the concept of borrowing and breaking up tens into ones.
Subtract 2-digit numbers from 2-digit numbers with borrowing

Example: Subtract 26 from 42.

Solution:

**Step 1: Subtraction of ones**
6 ones cannot be taken away from 2 ones

We borrow 1 ten from 4 tens
4 tens = 3 ten + 10 ones

Now add 10 ones to 2 ones
Therefore, 10 ones + 2 ones = 12 ones

Now subtract 6 ones from 12 ones
12 ones – 6 ones = 6 ones
Write 6 at ones place

**Step 2: Subtraction of tens**
Finally subtract 2 tens from 3 tens
3 tens – 2 tens = 1 tens
Write 1 at tens place

Thus 42 – 26 = 16
Exercise 29

(A) Subtract:

1. \[ \begin{array}{c}
\text{T} \\
3 \\
\text{O} \\
\text{2} \\
\hline
\text{1} \\
\text{5} \\
\end{array} \]

2. \[ \begin{array}{c}
\text{T} \\
7 \\
\text{O} \\
\text{0} \\
\hline
\text{2} \\
\text{5} \\
\end{array} \]

3. \[ \begin{array}{c}
\text{T} \\
9 \\
\text{O} \\
\text{0} \\
\hline
\text{3} \\
\text{1} \\
\end{array} \]

4. \[ \begin{array}{c}
\text{T} \\
7 \\
\text{O} \\
\text{6} \\
\hline
\text{4} \\
\text{7} \\
\end{array} \]

5. \[ \begin{array}{c}
\text{T} \\
8 \\
\text{O} \\
\text{0} \\
\hline
\text{5} \\
\text{2} \\
\end{array} \]

6. \[ \begin{array}{c}
\text{T} \\
4 \\
\text{O} \\
\text{2} \\
\hline
\text{2} \\
\text{4} \\
\end{array} \]

7. \[ \begin{array}{c}
\text{T} \\
6 \\
\text{O} \\
\text{7} \\
\hline
\text{4} \\
\text{8} \\
\end{array} \]

8. \[ \begin{array}{c}
\text{T} \\
5 \\
\text{O} \\
\text{5} \\
\hline
\text{2} \\
\text{8} \\
\end{array} \]

9. \[ \begin{array}{c}
\text{T} \\
8 \\
\text{O} \\
\text{0} \\
\hline
\text{3} \\
\text{2} \\
\end{array} \]

10. \[ \begin{array}{c}
\text{T} \\
7 \\
\text{O} \\
\text{5} \\
\hline
\text{5} \\
\text{7} \\
\end{array} \]

11. \[ \begin{array}{c}
\text{T} \\
8 \\
\text{O} \\
\text{9} \\
\hline
\text{7} \\
\text{8} \\
\end{array} \]

12. \[ \begin{array}{c}
\text{T} \\
7 \\
\text{O} \\
\text{0} \\
\hline
\text{5} \\
\text{1} \\
\end{array} \]

(B) Solve:

13. \[ 82 - 36 = \]

14. \[ 72 - 18 = \]

15. \[ 53 - 29 = \]

16. \[ 44 - 15 = \]

17. \[ 35 - 27 = \]

18. \[ 90 - 82 = \]

19. \[ 95 - 77 = \]

20. \[ 66 - 49 = \]

21. \[ 37 - 28 = \]

22. \[ 85 - 18 = \]
Solve real life problems of subtraction with borrowing

Example 1:
Ayaz has 20 oranges. He sold 7 oranges.
How many oranges are left?

Solution:
Ayaz has 20 oranges.
He sells 7 oranges.
Left 13 oranges.

Thus 20 − 7 = 13 oranges left

Example 2:
Rabia is 33 years old and Khalida is 19 years old. What is the difference between the ages of Rabia and Khalida?

Solution:
Age of Rabia 33 years
Age of Khalida 19 years
Difference 14

Thus 33 − 19 = 14 is the difference between their ages.
(1) Danish purchased 32 oranges. His brother ate 3 of them. How many oranges does Danish have now?

(2) Zarina had 23 hens and she gave 5 to her sister. How many hens are left with her?

(3) Faraz has 12 kites of red and blue colour. If 7 of these are red. How many kites are of blue colour?

(4) Nadeem earned 15 points in racing. He needs 32 points to win. How many more points he must earn to win?

(5) Areeba found 45 snail shells on sea shore. She uses 18 of these for making a pattern. How many snail shells are left there?

(6) Kanwal had 25 flowers. Only 16 used to make for bucket. How many flowers does she have?

(7) Mr. Kareem planted 32 radish seeds. The birds ate 8 of them. How many radish seeds are left?

(8) Paras has 82 sweets. Her brother has 35 fewer than Paras. How many sweets does her brother have?

(9) Bisma purchased 36 bananas. Her sister took 18 of them. How many bananas did left with Bismah?

(10) Saleem had 33 parrots, he gave 24 to his brother. How many parrots he had left?
Subtraction of 3 digit numbers without borrowing
Subtract ones from 3-digit numbers without borrowing

Example: Subtract 7 from 269.

Solution:

\[
\begin{array}{ccc}
\text{T} & \text{O} & \text{H} \\
2 & 6 & 9 \\
- & 7 & \\
\hline \\
2 & 6 & 2 \\
\end{array}
\]

Thus \( 269 - 7 = 262 \)

Exercise 31

(A) Subtract the following:

(1) \[
\begin{array}{ccc}
\text{T} & \text{O} & \text{H} \\
3 & 8 & 1 \\
- & 1 & \\
\hline \\
2 & 7 & 0 \\
\end{array}
\]

(2) \[
\begin{array}{ccc}
\text{T} & \text{O} & \text{H} \\
4 & 5 & 5 \\
- & 4 & \\
\hline \\
4 & 1 & 1 \\
\end{array}
\]

(3) \[
\begin{array}{ccc}
\text{T} & \text{O} & \text{H} \\
3 & 6 & 9 \\
- & 6 & \\
\hline \\
3 & 0 & 3 \\
\end{array}
\]

(4) \[
\begin{array}{ccc}
\text{T} & \text{O} & \text{H} \\
5 & 7 & 8 \\
- & 7 & \\
\hline \\
5 & 0 & 1 \\
\end{array}
\]

(5) \[
\begin{array}{ccc}
\text{T} & \text{O} & \text{H} \\
7 & 4 & 6 \\
- & 5 & \\
\hline \\
6 & 9 & 1 \\
\end{array}
\]

(6) \[
\begin{array}{ccc}
\text{T} & \text{O} & \text{H} \\
6 & 3 & 7 \\
- & 3 & \\
\hline \\
6 & 0 & 4 \\
\end{array}
\]

(7) \[
\begin{array}{ccc}
\text{T} & \text{O} & \text{H} \\
8 & 6 & 8 \\
- & 5 & \\
\hline \\
8 & 1 & 3 \\
\end{array}
\]

(8) \[
\begin{array}{ccc}
\text{T} & \text{O} & \text{H} \\
7 & 7 & 9 \\
- & 3 & \\
\hline \\
7 & 4 & 6 \\
\end{array}
\]

(B) Tick (✓) the correct and cross (✗) the incorrect:

(1) \( 119 - 2 = 117 \) ✓

(2) \( 507 - 5 = 502 \)

(3) \( 313 - 2 = 315 \)

(4) \( 429 - 7 = 322 \)

(5) \( 738 - 4 = 424 \)
Subtract 2-digit numbers from 3-digit numbers without borrowing

Example: Solve 589 – 38

Solution:

\[
\begin{array}{c}
\text{H} \\
\text{T} \\
\text{O}
\end{array} \quad \begin{array}{c} 5 \\
8 \\
9 \\
\end{array} \quad \begin{array}{c} 6 \\
8 \\
9 \\
\end{array} \quad \begin{array}{c} \text{H} \\
\text{T} \\
\text{O}
\end{array} \quad \begin{array}{c} 5 \\
5 \\
1 \\
\end{array} \quad \begin{array}{c} 6 \\
8 \\
9 \\
\end{array} \quad \begin{array}{c} 3 \\
8 \\
\end{array} \quad \begin{array}{c} \text{H} \\
\text{T} \\
\text{O}
\end{array} \quad \begin{array}{c} 5 \\
5 \\
1 \\
\end{array} \\
\end{array}
\]

(B) Solve and match the correct answer from column ‘A’ to column ‘B’:

(A) Solve:

|   | H | T | O |   | H | T | O |   | H | T | O |   | H | T | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|(1)| 6 | 7 | 5 | – | 6 | 4 |   |   |   |   |   |   |   |   |
|(2)| 4 | 8 | 7 | – | 7 | 6 |   |   |   |   |   |   |   |   |
|(3)| 3 | 9 | 9 | – | 8 | 8 |   |   |   |   |   |   |   |   |
|(4)| 4 | 3 | 1 | – | 2 | 0 |   |   |   |   |   |   |   |   |
|(5)| 8 | 8 | 8 | – | 8 | 8 |   |   |   |   |   |   |   |   |
|(6)| 5 | 6 | 7 | – | 6 | 0 |   |   |   |   |   |   |   |   |
|(7)| 9 | 7 | 8 | – | 4 | 3 |   |   |   |   |   |   |   |   |
|(8)| 3 | 3 | 6 | – | 2 | 3 |   |   |   |   |   |   |   |   |

(B) Solve and match the correct answer from column ‘A’ to column ‘B’:

<table>
<thead>
<tr>
<th></th>
<th>Column ‘A’</th>
<th></th>
<th>Column ‘B’</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>125 – 20</td>
<td>=</td>
<td>561 – 31</td>
</tr>
<tr>
<td>(2)</td>
<td>235 – 14</td>
<td>=</td>
<td>137 – 32</td>
</tr>
<tr>
<td>(3)</td>
<td>385 – 71</td>
<td>=</td>
<td>677 – 77</td>
</tr>
<tr>
<td>(4)</td>
<td>566 – 36</td>
<td>=</td>
<td>247 – 26</td>
</tr>
<tr>
<td>(5)</td>
<td>666 – 66</td>
<td>=</td>
<td>395 – 81</td>
</tr>
</tbody>
</table>

Exercise 32
Subtract 3-digit numbers from 3-digit numbers without borrowing

Example: Solve $387 - 265$

Solution:

\[
\begin{array}{c|c|c|c}
H & T & O \\
\hline
3 & 8 & 7 \\
- & 2 & 6 & 5 \\
\hline
1 & 2 & 2 \\
\end{array}
\]

Hence $387 - 265 = 122$

Exercise 33

(A) Find the difference:

1. \[
\begin{array}{c|c|c|c}
H & T & O \\
\hline
2 & 7 & 6 \\
- & 1 & 6 & 3 \\
\hline
1 & 1 & 3 \\
\end{array}
\]

2. \[
\begin{array}{c|c|c|c}
H & T & O \\
\hline
3 & 6 & 9 \\
- & 2 & 3 & 2 \\
\hline
1 & 3 & 7 \\
\end{array}
\]

3. \[
\begin{array}{c|c|c|c}
H & T & O \\
\hline
6 & 6 & 6 \\
- & 6 & 4 & 3 \\
\hline
0 & 2 & 3 \\
\end{array}
\]

4. \[
\begin{array}{c|c|c|c}
H & T & O \\
\hline
7 & 2 & 5 \\
- & 3 & 0 & 4 \\
\hline
4 & 2 & 1 \\
\end{array}
\]

5. \[
\begin{array}{c|c|c|c}
H & T & O \\
\hline
9 & 9 & 9 \\
- & 4 & 4 & 4 \\
\hline
5 & 5 & 5 \\
\end{array}
\]

6. \[
\begin{array}{c|c|c|c}
H & T & O \\
\hline
8 & 8 & 3 \\
- & 2 & 6 & 2 \\
\hline
6 & 2 & 1 \\
\end{array}
\]

7. \[
\begin{array}{c|c|c|c}
H & T & O \\
\hline
5 & 5 & 6 \\
- & 3 & 1 & 2 \\
\hline
2 & 4 & 4 \\
\end{array}
\]

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

(B) Solve:

1. $257 - 141 = \underline{116}$

2. $385 - 383 = \underline{2}$

3. $467 - 157 = \underline{310}$

4. $500 - 400 = \underline{100}$

5. $611 - 600 = \underline{11}$

6. $733 - 730 = \underline{3}$
Solve real life problems of subtraction without borrowing

Activity

Saima bought a pair of shoes for Rs 238. Raza bought a pair of shoes for Rs 225. What is the difference in paid amounts?

**Solution:**

<table>
<thead>
<tr>
<th>Rupees</th>
<th>H</th>
<th>T</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saima paid</td>
<td>238</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raza paid</td>
<td>−225</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference</td>
<td>013</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The difference in price is Rs 13.

**Exercise 34**

1. Nazir scored 137 runs in the cricket match. Saleem scored only 26 runs. What is the difference in both scores?
2. There were 256 toffees in the jar. Now there are only 144 toffees. How many toffees are missing?
3. Mr. Akram invited 299 peoples in the party. Only 242 people came. How many people did not come to the party?
4. The Rizwan book store purchased 986 books. The next day, 763 books out of them were sold. How many left?
5. One of the book shelves can hold 265 books. A store keeper puts 153 books on the shelf. How many more books can be put on the shelf?
6. Kiran had Rs 765. She spent Rs 545 on clothes. How much money had left?
7. Farah used 273 roses and 62 tulips for a bouquet. How many more roses than tulips she used?
Subtraction of 3-digit numbers with borrowing

Subtract ones from 3-digit numbers with borrowing

Example 1: Solve 841 – 9

Solution:
Ones are subtracted from ones
Step 1: 9 ones can not be taken away from 1 ones borrow 1 tens.
1 ten = 10 ones
Therefore 10 + 1 = 11 ones
Subtraction of ones: 11 – 9 = 2 ones,
write 2 at ones place.

Step 2: After borrowing one tens we get 4 tens - 1 tens = 3 tens
There is 8 at hundreds place.

Thus 841 – 9 = 832

Exercise 35

(A) Solve:

(1) 325 - 9 =
(2) 433 - 7 =
(3) 571 - 4 =
(4) 730 - 8 =
(5) 902 - 6 =
(6) 805 - 7 =

(B) Complete:

(1) 552 - 3 =
(2) 902 - 8 =
(3) 303 - 5 =
(4) 507 - 9 =
(5) 685 - 8 =
(6) 703 - 4 =
Subtract 2-digit numbers from 3-digit numbers with borrowing

Example: Solve 739 – 64

Solution:
Write the numbers in place value form.

\[
739 = 7 \text{ hundreds} + 3 \text{ tens} + 9 \text{ ones}
\]

Or \[739 = 700 + 30 + 9\]

64 = 6 tens + 4 ones

or \[64 = 60 + 4\]

**Step 1:**
Subtract ones from ones

9 ones – 4 ones = 5 ones

Write 5 at ones place

**Step 2:**
Subtract tens from tens.

6 can not be taken away from 3.

Therefore borrow one hundred for tens.

1 hundred = 10 tens

Now subtract 6 tens from 13 tens

13 tens – 6 tens = 7 tens

Write 7 at tens place

**Step 3:**
After borrowing 1 hundred from 7 hundreds.

6 hundred is left.

Finally subtract hundreds from hundreds.

6 hundreds – 0 hundreds = 6 hundreds

Write 6 at hundreds place

Thus \[739 – 64 = 675\]
Activity

Solve.

\[ 900 - 84 = \]

Step 1: Subtract ones

\[ \begin{array}{ccc}
H & T & O \\
9 & 0 & 0 \\
- & 8 & 4 \\
\hline
\end{array} \]

Step 2: Subtract tens

\[ \begin{array}{ccc}
H & T & O \\
8 & 9 & 0 \\
- & 8 & 4 \\
\hline
\end{array} \]

Thus \[ 900 - 84 = \]

Exercise 36

(A) Solve:

\[ \begin{array}{ccc}
H & T & O \\
(1) & 2 & 3 & 5 \\
- & 4 & 6 \\
\hline
\end{array} \]

\[ \begin{array}{ccc}
H & T & O \\
(2) & 5 & 6 & 7 \\
- & 8 & 8 \\
\hline
\end{array} \]

\[ \begin{array}{ccc}
H & T & O \\
(3) & 3 & 8 & 8 \\
- & 9 & 9 \\
\hline
\end{array} \]

\[ \begin{array}{ccc}
H & T & O \\
(4) & 6 & 6 & 6 \\
- & 7 & 7 \\
\hline
\end{array} \]

\[ \begin{array}{ccc}
H & T & O \\
(5) & 6 & 5 & 3 \\
- & 9 & 2 \\
\hline
\end{array} \]

\[ \begin{array}{ccc}
H & T & O \\
(6) & 7 & 6 & 0 \\
- & 8 & 1 \\
\hline
\end{array} \]

\[ \begin{array}{ccc}
H & T & O \\
(7) & 7 & 0 & 3 \\
- & 9 & 5 \\
\hline
\end{array} \]

\[ \begin{array}{ccc}
H & T & O \\
(8) & 3 & 3 & 4 \\
- & 9 & 8 \\
\hline
\end{array} \]

\[ \begin{array}{ccc}
H & T & O \\
(9) & 4 & 8 & 5 \\
- & 7 & 7 \\
\hline
\end{array} \]

(B) Complete:

(1) \[ 330 - 45 = \]

(2) \[ 560 - 81 = \]

(3) \[ 446 - 97 = \]

(4) \[ 600 - 96 = \]
Subtract 3-digit numbers from 3-digit numbers with borrowing

Example: Subtract 294 from 582

Solution: Solve \(582 - 294 = \) 

**Step 1:** Subtraction of ones.

4 ones cannot be taken away from 2 ones

Borrow 1 ten from 8 tens.

Add 10 ones to 2 ones, \(10 + 2 = 12\) ones

\(12 - 4 = 8\) ones, write 8 at ones place.

**Step 2:** Subtraction of tens

After borrowing 1 ten from 8 tens, 7 tens are left. Since 9 can’t be taken away from 7 tens,

So we are borrowing 1 hundred from 5 hundreds, 4 hundreds are left

\(5\) hundreds = \(4\) hundreds + 10 tens

Add 10 tens and 7 tens, \(10 + 7 = 17\) tens

\(17 - 9 = 8\) tens

Therefore, write 8 at tens place

**Step 3:** Subtraction of hundreds

After borrowing 1 hundred, from 5 hundreds, we are left with 4 hundreds. \(4 - 2 = 2\) hundreds.

Write 2 at hundreds place.

Thus \(582 - 294 = 288\)
Exercise 37

(A) Solve:

(1) \[ \begin{array}{c}
\text{H} \\
\text{T} \\
\text{O}
\end{array} \begin{array}{c}
4 \ 2 \ 6 \\
\ - \\
2 \ 8 \ 7
\end{array} \]

(2) \[ \begin{array}{c}
\text{H} \\
\text{T} \\
\text{O}
\end{array} \begin{array}{c}
3 \ 4 \ 5 \\
\ - \\
1 \ 8 \ 6
\end{array} \]

(3) \[ \begin{array}{c}
\text{H} \\
\text{T} \\
\text{O}
\end{array} \begin{array}{c}
4 \ 6 \ 2 \\
\ - \\
3 \ 7 \ 8
\end{array} \]

(4) \[ \begin{array}{c}
\text{H} \\
\text{T} \\
\text{O}
\end{array} \begin{array}{c}
7 \ 1 \ 2 \\
\ - \\
4 \ 2 \ 5
\end{array} \]

(5) \[ \begin{array}{c}
\text{H} \\
\text{T} \\
\text{O}
\end{array} \begin{array}{c}
8 \ 6 \ 0 \\
\ - \\
3 \ 8 \ 6
\end{array} \]

(6) \[ \begin{array}{c}
\text{H} \\
\text{T} \\
\text{O}
\end{array} \begin{array}{c}
8 \ 2 \ 2 \\
\ - \\
2 \ 7 \ 8
\end{array} \]

(7) \[ \begin{array}{c}
\text{H} \\
\text{T} \\
\text{O}
\end{array} \begin{array}{c}
5 \ 4 \ 2 \\
\ - \\
2 \ 5 \ 6
\end{array} \]

(8) \[ \begin{array}{c}
\text{H} \\
\text{T} \\
\text{O}
\end{array} \begin{array}{c}
6 \ 1 \ 3 \\
\ - \\
3 \ 3 \ 6
\end{array} \]

(9) \[ \begin{array}{c}
\text{H} \\
\text{T} \\
\text{O}
\end{array} \begin{array}{c}
9 \ 5 \ 3 \\
\ - \\
6 \ 2 \ 5
\end{array} \]

(B) Complete:

(1) \[ 874 - 287 = \boxed{\phantom{0}} \]

(2) \[ 847 - 758 = \boxed{\phantom{0}} \]

(3) \[ 621 - 388 = \boxed{\phantom{0}} \]

(4) \[ 513 - 239 = \boxed{\phantom{0}} \]

(5) \[ 626 - 378 = \boxed{\phantom{0}} \]

(6) \[ 931 - 832 = \boxed{\phantom{0}} \]
Exercise 38

Solve real life problems of subtraction with borrowing

Example: There are 872 books in the library, students borrowed 198 of them. How many books are left behind?

Solution:

\[
\begin{array}{c}
\text{In Library} & 872 \\
\text{Students borrowed} & -198 \\
\text{Left behind} & 674 \\
\end{array}
\]

Hence \(872 - 198 = 674\)

Exercise 38

(1) Ali has 125 chickens, 9 of them are sold. How many chickens are left?

(2) There are 135 shops in a shopping mall. On Friday only 7 shops are open. How many shops are closed?

(3) There are 650 students in a school. If 153 students are in primary section. How many students are in secondary section?

(4) There are 364 students in girls school. 57 students were absent on last Monday. How many students were present on that day?

(5) A mango tree has 137 mangoes. 47 mangoes are picked by children. How many mangoes are left on the tree?

(6) There are 932 books in the library. Students borrowed 155 books. How many books are left behind?

(7) Faraz has Rs 172 in his pocket. He wants to buy a toy car of Rs 181. How much more money he needs to buy a toy car?
ADDITION AND SUBTRACTION
Solve simple problems regarding addition and subtraction with carrying/borrowing in mixed form

Example 1: After adding 4 more books in my bag, I get 12 books. How many books I had before?

Solution

\[
\begin{array}{c}
\text{T} \\
01 \, 10
\end{array}
\quad
\begin{array}{c}
\text{O} \\
12
\end{array}
\quad
\begin{array}{c}
\text{T} \\
01
\end{array}
\begin{array}{c}
\text{O} \\
4
\end{array}

- \ 4

\begin{array}{c}
\text{T} \\
10
\end{array}
\begin{array}{c}
\text{O} \\
8
\end{array}
\quad
\begin{array}{c}
\text{Verification} \\
8 + 4 = 12
\end{array}

Thus number of books are 8

Example 2: Nida subtract Rs 25 from amount of Sara, Nida gets Rs 375. What is Sara’s amount?

Solution

\[
\begin{array}{c}
\text{H} \\
25
\end{array}
\quad
\begin{array}{c}
\text{T} \\
+3 \, 7 \, 5
\end{array}
\quad
\begin{array}{c}
\text{O} \\
+3 \, 7 \, 5
\end{array}
\quad
\begin{array}{c}
\text{H} \\
\text{O}
\end{array}
\begin{array}{c}
\text{T} \\
12 \, 5
\end{array}
\quad
\begin{array}{c}
\text{O} \\
400 \, 375
\end{array}
\quad
\begin{array}{c}
\text{Verification} \\
400 \, 25 = 375
\end{array}

Thus Sara’s amount is Rs 400

Exercise 39

(1) Iqbal add my number to 7, Iqbal gets 20. What is my number?

(2) Anis subtract 14 from Nazir’s number, Anis gets 30. What is Nazir’s number?

(3) You add my number to 250, you get 700. What is my number?

(4) Salma subtract 320 from Haleema’s number, Salma gets 800. What is Haleema’s number?

(5) Akhtar add Aslam’s amount to Rs 80, Akhtar get Rs 300. What is Aslam’s amount?
MUTLIPLICATION

Recognize multiplication as repeated addition and use of multiplication symbol “x”

Four bicycles are given. Each bicycle has 2 wheels in all. What is the number of wheels in all? We do it simply by adding 2 repeatedly.

\[2 + 2 + 2 + 2 = 8\]

Or Four times 2 is written as:

\[4 \times 2 = 8\]

Read as 2 multiply by 4 is equal to 8. Repeated addition is called “Multiplication”.

Here symbol “x” is called the sign of multiplication.

Activity 1

Count the balls and write.

\[\_\_\_\_ + \_\_\_\_ + \_\_\_\_ + \_\_\_\_ + \_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_

5 times 3 =

\[5 \times 3 = \_\_\_\_\_\_\_\_\_\_

Teacher’s Note

Teacher should explain the concept of multiplication through repeated addition by using available objects.
Activity 2

Count the pencils.

\[ \begin{array}{c}
\text{Activity 3} \\
\text{How many petals altogether?}
\end{array} \]

\[ \begin{array}{c}
\text{Or} \quad 2 \times 7 = \quad \Box \\
\text{Or} \quad 5 \times 4 = \quad \Box
\end{array} \]

Solve:

\[ \begin{align*}
4 \times 2 &= 2 + 2 + 2 + 2 = 8 \\
3 \times 2 &= \quad + \quad + \quad = \\
5 \times 10 &= \quad + \quad + \quad + \quad + \quad = \\
5 \times 5 &= \quad + \quad + \quad + \quad + \quad = \\
4 \times 5 &= \quad + \quad + \quad + \quad + \quad = \\
6 \times 2 &= \quad + \quad + \quad + \quad + \quad + \quad = \\
5 \times 2 &= \quad + \quad + \quad + \quad + \quad = \\
7 \times 2 &= \quad + \quad + \quad + \quad + \quad + \quad + \quad = \\
\end{align*} \]
Counting by 2s
Ali is jumping in 2s.

Here we have counted the numbers by 2s as:
2, 4, 6, 8, 10, 12, 14, ... and so on.

Activity 1
Complete by counting 2s.

Activity 2
How many flowers in all?

3 times 2 = ☐ Or 3 \times 2 = ☐

Activity 3
How many buttons in all?

4 times 2 = ☐ Or ☐ \times ☐ = ☐
Table of 2.

<table>
<thead>
<tr>
<th>Addition table</th>
<th>Way of reading</th>
<th>Multiplication table</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1 two is 2</td>
<td>1 x 2 = 2</td>
</tr>
<tr>
<td>2 + 2</td>
<td>2 twos are 4</td>
<td>2 x 2 = 4</td>
</tr>
<tr>
<td>2 + 2 + 2</td>
<td>3 twos are 6</td>
<td>3 x 2 = 6</td>
</tr>
<tr>
<td>2 + 2 + 2 + 2</td>
<td>4 twos are 8</td>
<td>4 x 2 = 8</td>
</tr>
<tr>
<td>2 + 2 + 2 + 2 + 2</td>
<td>5 twos are 10</td>
<td>5 x 2 = 10</td>
</tr>
<tr>
<td>2 + 2 + 2 + 2 + 2 + 2</td>
<td>6 twos are 12</td>
<td>6 x 2 = 12</td>
</tr>
<tr>
<td>2 + 2 + 2 + 2 + 2 + 2 + 2 + 2</td>
<td>7 twos are 14</td>
<td>7 x 2 = 14</td>
</tr>
<tr>
<td>2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2</td>
<td>8 twos are 16</td>
<td>8 x 2 = 16</td>
</tr>
<tr>
<td>2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2</td>
<td>9 twos are 18</td>
<td>9 x 2 = 18</td>
</tr>
<tr>
<td>2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2</td>
<td>10 twos are 20</td>
<td>10 x 2 = 20</td>
</tr>
</tbody>
</table>

**Activity**
Complete and read aloud the table of 2.

<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>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Teacher’s Note**
Teacher should demonstrate the table of 2 in the classroom. Make groups of children in twos and to develop the table of two.
Counting by 3s:
Ali is jumping in 3s.

Here we have counted the numbers by threes as:
3, 6, 9, 12, 15, 18 and so on.

Activity 1 Complete by counting 3s.

3  6  9  12  15  18  21  24  27  30

Activity 2 How many balloons in all?

4 times 3 = □ □ Or 4 × 3 = □

Activity 3 How many bananas in all?

6 times 3 = □ □ Or 6 × 3 = □
Table of 3.

<table>
<thead>
<tr>
<th>Addition table</th>
<th>Way of reading</th>
<th>Multiplication table</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1 three is 3</td>
<td>1 x 3 = 3</td>
</tr>
<tr>
<td>3+3</td>
<td>2 threes are 6</td>
<td>2 x 3 = 6</td>
</tr>
<tr>
<td>3+3+3</td>
<td>3 threes are 9</td>
<td>3 x 3 = 9</td>
</tr>
<tr>
<td>3+3+3+3</td>
<td>4 threes are 12</td>
<td>4 x 3 = 12</td>
</tr>
<tr>
<td>3+3+3+3+3</td>
<td>5 threes are 15</td>
<td>5 x 3 = 15</td>
</tr>
<tr>
<td>3+3+3+3+3+3</td>
<td>6 threes are 18</td>
<td>6 x 3 = 18</td>
</tr>
<tr>
<td>3+3+3+3+3+3+3</td>
<td>7 threes are 21</td>
<td>7 x 3 = 21</td>
</tr>
<tr>
<td>3+3+3+3+3+3+3+3</td>
<td>8 threes are 24</td>
<td>8 x 3 = 24</td>
</tr>
<tr>
<td>3+3+3+3+3+3+3+3</td>
<td>9 threes are 27</td>
<td>9 x 3 = 27</td>
</tr>
<tr>
<td>3+3+3+3+3+3+3+3+3</td>
<td>10 threes are 30</td>
<td>10 x 3 = 30</td>
</tr>
</tbody>
</table>

Activity: Complete and read aloud the table of 3.

<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>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>30</td>
</tr>
</tbody>
</table>
Counting by 4s:
Ali is jumping in 4s.

Here we have counted the numbers by fours as: 4, 8, 12, 16, 20 and so on.

Activity 1: Complete by counting 4s.

4 8 12 16 20 24 28 32 36 40

Activity 2: How many wheels in 6 cars?

6 times 4 =  Or 6 x 4 =

Activity 3: How many eggs?

5 times 4 =  Or 5 x 4 =
### Table of 4.

<table>
<thead>
<tr>
<th>Addition table</th>
<th>Way of reading</th>
<th>Multiplication table</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 four is 4</td>
<td>1 x 4 = 4</td>
</tr>
<tr>
<td>4 + 4</td>
<td>2 fours are 8</td>
<td>2 x 4 = 8</td>
</tr>
<tr>
<td>4 + 4 + 4</td>
<td>3 fours are 12</td>
<td>3 x 4 = 12</td>
</tr>
<tr>
<td>4 + 4 + 4 + 4</td>
<td>4 fours are 16</td>
<td>4 x 4 = 16</td>
</tr>
<tr>
<td>4 + 4 + 4 + 4 + 4</td>
<td>5 fours are 20</td>
<td>5 x 4 = 20</td>
</tr>
<tr>
<td>4 + 4 + 4 + 4 + 4 + 4</td>
<td>6 fours are 24</td>
<td>6 x 4 = 24</td>
</tr>
<tr>
<td>4 + 4 + 4 + 4 + 4 + 4 + 4</td>
<td>7 fours are 28</td>
<td>7 x 4 = 28</td>
</tr>
<tr>
<td>4 + 4 + 4 + 4 + 4 + 4 + 4 + 4</td>
<td>8 fours are 32</td>
<td>8 x 4 = 32</td>
</tr>
<tr>
<td>4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4</td>
<td>9 fours are 36</td>
<td>9 x 4 = 36</td>
</tr>
<tr>
<td>4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4</td>
<td>10 fours are 40</td>
<td>10 x 4 = 40</td>
</tr>
</tbody>
</table>

### Activity

Complete and read aloud the table of 4.

<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>4</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Counting by 5s:
Ali is jumping in 5s.

Here we have counted the numbers by fives as:
5, 10, 15, 20, 25 and so on.

Activity 1  Count by fives and write.
(one ✿ ✿ = 5 ✿ ✿)

5 10 20 40 55 75 90 105 120 135 150

Activity 2  Complete the table by counting fives.

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>15</td>
<td>30</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>55</td>
<td>75</td>
<td>90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>105</td>
<td>120</td>
<td>135</td>
<td>150</td>
<td></td>
</tr>
</tbody>
</table>

Activity 3  Start from 5, write the numbers counting by fives upto 60.

5 10 60
Table of 5.

<table>
<thead>
<tr>
<th>Addition table</th>
<th>Way of reading</th>
<th>Multiplication table</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>1 five is 5</td>
<td>1 x 5 = 5</td>
</tr>
<tr>
<td>5+5</td>
<td>2 fives are 10</td>
<td>2 x 5 = 10</td>
</tr>
<tr>
<td>5+5+5</td>
<td>3 fives are 15</td>
<td>3 x 5 = 15</td>
</tr>
<tr>
<td>5+5+5+5</td>
<td>4 fives are 20</td>
<td>4 x 5 = 20</td>
</tr>
<tr>
<td>5+5+5+5+5</td>
<td>5 fives are 25</td>
<td>5 x 5 = 25</td>
</tr>
<tr>
<td>5+5+5+5+5+5+5</td>
<td>6 fives are 30</td>
<td>6 x 5 = 30</td>
</tr>
<tr>
<td>5+5+5+5+5+5+5+5</td>
<td>7 fives are 35</td>
<td>7 x 5 = 35</td>
</tr>
<tr>
<td>5+5+5+5+5+5+5+5+5</td>
<td>8 fives are 40</td>
<td>8 x 5 = 40</td>
</tr>
<tr>
<td>5+5+5+5+5+5+5+5+5</td>
<td>9 fives are 45</td>
<td>9 x 5 = 45</td>
</tr>
<tr>
<td>5+5+5+5+5+5+5+5+5+5</td>
<td>10 fives are 50</td>
<td>10 x 5 = 50</td>
</tr>
</tbody>
</table>

Activity

Complete and read aloud 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></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Counting by 10s:
Ali is jumping in 10s.

Here we have counted the numbers by tens as: 10, 20, 30, 40, 50, 60 and so on.

### Activity 1
Count by tens and write.

<table>
<thead>
<tr>
<th></th>
<th>10</th>
<th>20</th>
<th>50</th>
<th>80</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>110</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>160</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>190</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>210</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>250</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>280</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>310</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>350</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>400</td>
</tr>
</tbody>
</table>

### Activity 2
Start from 10, write the numbers counting by tens up to 120.

|    | 10 | 20 |    |    |    | 120 |
Table of 10.

<table>
<thead>
<tr>
<th>Addition table</th>
<th>Way of reading</th>
<th>Multiplication table</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>1 ten is 10</td>
<td>1 x 10 = 10</td>
</tr>
<tr>
<td>10 + 10</td>
<td>2 tens are 20</td>
<td>2 x 10 = 20</td>
</tr>
<tr>
<td>10 + 10 + 10</td>
<td>3 tens are 30</td>
<td>3 x 10 = 30</td>
</tr>
<tr>
<td>10 + 10 + 10 + 10</td>
<td>4 tens are 40</td>
<td>4 x 10 = 40</td>
</tr>
<tr>
<td>10 + 10 + 10 + 10 + 10</td>
<td>5 tens are 50</td>
<td>5 x 10 = 50</td>
</tr>
<tr>
<td>10 + 10 + 10 + 10 + 10 + 10</td>
<td>6 tens are 60</td>
<td>6 x 10 = 60</td>
</tr>
<tr>
<td>10 + 10 + 10 + 10 + 10 + 10 + 10</td>
<td>7 tens are 70</td>
<td>7 x 10 = 70</td>
</tr>
<tr>
<td>10 + 10 + 10 + 10 + 10 + 10 + 10 + 10</td>
<td>8 tens are 80</td>
<td>8 x 10 = 80</td>
</tr>
<tr>
<td>10 + 10 + 10 + 10 + 10 + 10 + 10 + 10 + 10</td>
<td>9 tens are 90</td>
<td>9 x 10 = 90</td>
</tr>
<tr>
<td>10 + 10 + 10 + 10 + 10 + 10 + 10 + 10 + 10 + 10</td>
<td>10 tens are 100</td>
<td>10 x 10 = 100</td>
</tr>
</tbody>
</table>

**Activity**

Complete and read aloud the table of 10.

<table>
<thead>
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(1) Complete these tables:

![Multiplication Tables]

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(2) Fill in the boxes:

1. \(7 \times 5 = \) 35
2. \(4 \times 2 = \) 8
3. \(9 \times 3 = \) 27
4. \(9 \times 3 = \) 27
5. \(8 \times 2 = \) 16
6. \(8 \times 3 = \) 24
7. \(10 \times 5 = \) 50
8. \(6 \times 5 = \) 30
9. \(5 \times 5 = \) 25
10. \(8 \times 3 = \) 24
11. \(4 \times 10 = \) 40
12. \(6 \times 4 = \) 24
13. \(5 \times 10 = \) 50
14. \(8 \times 4 = \) 32
15. \(9 \times 2 = \) 18
16. \(8 \times 7 = \) 56
17. \(7 \times 10 = \) 70
18. \(10 \times 10 = \) 100
Multiply numbers within multiplication table

Example 1: Solve $3 \times 2$

$3 \times 2$ can also be written as:

$$\begin{array}{c}
3 \\
\times 2 \\
\hline \\
\end{array}$$

Multiply 3 by 2, we add 3, 2 times we get 6

Or read the table of 2 upto 3, we get 6.

So, $3 \times 2 = 6$

Example 2: Solve $5 \times 10$

$5 \times 10$ can also be written as:

$$\begin{array}{c}
5 \\
\times 10 \\
\hline \\
\end{array}$$

Multiply 5 by 10, we add 10, 5 times

Or read the table of 10 upto 5, we get 50.

So, $5 \times 10 = 50$
(1) Solve the following.

\[
\begin{array}{cccc}
5 & \times & 2 & = \\
9 & \times & 2 & = \\
5 & \times & 5 & = \\
8 & \times & 4 & = \\
6 & \times & 3 & = \\
3 & \times & 3 & = \\
9 & \times & 10 & = \\
\end{array}
\]

(2) Solve:

(1) 4 \times 2 = \\
(2) 2 \times 3 = \\
(3) 4 \times 4 = \\
(4) 3 \times 5 = \\
(5) 5 \times 5 = \\
(6) 2 \times 6 = \\

(4) Fill in the blanks:

\[
\begin{array}{ccc}
3 \times 2 &=& \\
7 \times 5 &=& \\
8 \times 2 &=& \\
3 \times 4 &=& \\
5 \times 2 &=& \\
3 \times 3 &=& \\
9 \times 3 &=& \\
8 \times 4 &=& \\
6 \times 4 &=& \\
\end{array}
\]

(5) Start from 30, write the numbers counting by 3s up to 60.

(6) Start from 50, write the numbers counting by 10s up to 150.
Verify commutative property of multiplication

As $3 \times 4 = 12$ and $4 \times 3 = 12$

In multiplication, two numbers can be put in any order. The answer will remain the same. This property is known as the commutative property of multiplication.

Example:

$2 \times 4 = 8 = 4 \times 2$
$6 \times 3 = 18 = 3 \times 6$

Exercise 43

Verify and complete these as commutative property of multiplication:

1. $5 \times 4 = 4 \times \boxed{}$
2. $7 \times 3 = 3 \times \boxed{}$
3. $6 \times 5 = 5 \times \boxed{}$
4. $4 \times 2 = 2 \times \boxed{}$
5. $3 \times 7 = \boxed{} \times 3$
6. $2 \times 8 = \boxed{} \times 2$
7. $9 \times 3 = \boxed{} \times 9$
8. $\boxed{} \times 5 = 5 \times 4$
9. $\boxed{} \times 10 = 10 \times 6$
Solve real life problems on multiplication

Example: The price of one balloon is Rs 5. Find the price of 3 balloons.

Solution:
The price of 1 balloon is 5 rupees.
The price of 3 balloon is $5 \times 3$ rupees.
Multiply 3 by 5,
Add 5, 3 times
we read the table of 3 up to 5 times, we get 15.
So, $3 \times 5 = 15$
Hence price of 3 balloons is Rs 15.

Exercise 44

(A) Answer the following:

(1) The price of one eraser is Rs 6. Find the price of 5 erasers.
(2) In a plaza, there are 4 rooms in one flat. Find the number of rooms in 8 such flats.
(3) A ceiling fan has 3 wings. How many wings have 10 fans?
(4) A bicycle has 2 wheels. How many wheels have 9 bicycles?
(5) A cow has 4 legs. How many legs have 3 cows?
(6) A child has 10 fingers in his both hands. How many fingers have 6 children?
(7) A shirt has 7 buttons. Find the number of buttons in 5 shirts.
(8) A child has 2 arms. How many arms have 7 children?
(9) In an examination, every child was given 4 pencils. How many pencils have 5 children?
DIVISION

Recognize division as successive subtraction and use of division symbol “÷”

Example 1: 8 Sweets are distributed among 4 girls in such a way that every one gets 2 sweets.

2 sweets are given to Sara \(8 - 2 = 6\) (6 left)
2 sweets are given to Shumaila \(6 - 2 = 4\) (4 left)
2 sweets are given to Uzma \(4 - 2 = 2\) (2 left)
The last 2 sweets are given to Bushra \(2 - 2 = 0\) (None left behind)

4 times we have subtracted 2 from 8.

We can write as: \(8 \div 2 = 4\)

The process of repeated subtraction is called division. The symbol of division is “÷”.

Division is reverse process of multiplication: \(4 \times 2 = 8\) and \(8 \div 2 = 4\)

Example 2: Look at these pictures.

6 tomatoes divided in 3 boxes, we get 2 tomatoes in each.

\[6 \div 3 = 2\]

3 boxes of 2 tomatoes each, it makes 6.

Now 6 tomatoes divided in 2 boxes, we get 3 tomatoes in each.

\[6 \div 2 = 3\]

2 boxes of 3 tomatoes each, it makes 6.
Divide numbers within the multiplication tables with remainder zero

**Example:** Solve: $18 \div 3$

### Solution:

$18 \div 3 = 6$

We can also solve as:

**Step 1:**
Here the number 18 written as **dividend**

**Step 2:**
Number 3 will be written as **divisor**

**Step 3:**
Read table of 3 till 18 comes
Now 6 will be written as **quotient**

**Step 4:**
Now subtract the numbers we get 0 as **remainder**

Thus we get $18 \div 3 = 6$

**Teacher’s Note**
Teacher should help the students understand the solved example on blackboard step by step.
(A) Solve:

(1)  
\[
\underline{\quad} \div \underline{\quad} = \underline{\quad}
\]

(2)  
\[
\underline{\quad} \div \underline{\quad} = \underline{\quad}
\]

(B) Solve:

1. 15 ÷ 3 = 5
2. 16 ÷ 2 = 
3. 10 ÷ 2 = 
4. 80 ÷ 10 = 
5. 16 ÷ 4 = 
6. 24 ÷ 3 = 
7. 14 ÷ 2 =
8. 45 ÷ 5 =
9. 18 ÷ 3 =
10. 27 ÷ 3 =
11. 50 ÷ 5 =
12. 24 ÷ 3 =
13. 12 ÷ 3 =
14. 18 ÷ 2 =
15. 30 ÷ 3 =
16. 10 ÷ 10 =
(C) Divide:

1. \[
\frac{4}{3)12 \quad \underline{-12} \quad 0}
\]

2. \[
\frac{3}{15}
\]

3. \[
\frac{2}{2}
\]

4. \[
\frac{3}{24}
\]

5. \[
\frac{2}{10}
\]

6. \[
\frac{2}{14}
\]

7. \[
\frac{3}{27}
\]

8. \[
\frac{4}{20}
\]

9. \[
\frac{5}{40}
\]

10. \[
\frac{4}{36}
\]

11. \[
\frac{5}{50}
\]

12. \[
\frac{10}{70}
\]

13. \[
\frac{5}{40}
\]

14. \[
\frac{4}{24}
\]

15. \[
\frac{10}{50}
\]
Solve real life problems involving division

Example:
Arif has fixed 4 pictures at one page then how many number of pages will be required for 32 pictures?

Solution:
Total number of pictures = 32
Fixed on one page = 4
Therefore \(\frac{32}{4} = 8\) or \(4 \div 32 = 8\)

So, Arif needs 8 pages.

Exercise 46

(1) 50 sweets were equally divided among 5 children. How many sweets did each child get?

(2) 18 books are divided equally among 2 girls. How many books did each girl get?

(3) 30 guests come to attend a party and they sat an chairs equally in 3 rows. Find the number of chairs in each row.

(4) 15 apples are given to 3 students. Find the number of apples equally divided in each one.

(5) Rafia has 24 stickers, if 4 stickers can be fixed at one page then how many pages does she need to fix all?

(6) If 4 packets contain 28 sweets. How many sweets will be in each packet?

(7) The cost of one pen is Rs 10. How many same pens can be bought for Rs 80?

(8) If Rafay covers a distance of 20 km in 2 days. How much distance does he cover in one day?
ADDITION, SUBTRACTION, MULTIPLICATION AND DIVISION

Solve real life problems (using Pakistani currency as well) involving addition, subtraction, multiplication and division.

In class I we have used Pakistani Coins 1, 2 and 5 and Notes of rupees 10, 20, 50, and 100. Here we will learn and use more about Pakistani currency.

This is a 500 Rupees Note

This is a 1000 Rupees Note

This is a 5000 Rupees Note

Teacher’s Note

Teacher should revised the identification of Pakistani currency notes/coins as brain storming activity using real currency.
Addition and Subtraction

Look at the objects available at a store.

Example 1: Find the total cost of a lamp and helicopter

Solution:

Lamp cost = Rs 550
Helicopter cost = + Rs 395
Total cost = Rs 945

Example 2: How much cost of the school bag is more than the football?

Solution:

School bag cost = Rs 465
Football cost = – Rs 210
Rs 255

The school bag cost is Rs 255 more than the football.
(A) How much do these cost?

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<td>Rs 499</td>
<td>Football</td>
<td>Rs 210</td>
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<td>Total</td>
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<td>Toy Car</td>
<td>Rs 325</td>
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(B) Find the difference of prices.

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</table>
(C) Solve:

(1) On Monday Farah spends two notes of Rs 100 and on Tuesday she spends 1 note of 500. How much does she spend in all?

(2) Raza bought a football in Rs 250, a book in Rs 135 and a cake in Rs 350. How much amount did he pay?

(3) The price of cake is Rs 365 and the price of chocolate box is Rs 150. What is the total price of both?

(4) Abeer has Rs 100. She gives to her sister Rs 25. How much money is left with her?

(5) Ahmer buys a bicycle for Rs 680. He pays Rs 500 only. How much more must he pay?

(6) Sana has Rs 200. She spends Rs 145 on shopping. How much money is left with her?

**Multiplication**

**Example:**

The cost of a pencil is Rs 10. What is the cost of 8 pencils?

**Solution:**

\[
\begin{align*}
\text{1 pencil cost} & = \text{10} \\
\text{8 pencils will cost} & = \text{x 8} \\
\text{Total cost} & = \text{80}
\end{align*}
\]

Thus, The cost of 8 pencils = Rs 80.
**Exercise 48**

1. The price of a biscuit is Rs 5. What is the cost of 6 such biscuits?
2. The cost of an eraser is Rs 8. What is the cost of 4 such erasers?
3. The price of a notebook is Rs 10. What is the cost of 9 such notebooks?
4. The cost of a packet of chips is Rs 7. What is the cost of 5 such packet of chips?
5. The price of a scale is Rs 6. What is the price of 3 such scales?
6. The cost of a banana is Rs 9. Find the cost of 2 bananas.

**Division:**

**Example:** The cost of 2 pencils is Rs 16. Find the cost of one pencil.

**Solution:** The cost of 2 pencils is Rs 16

The cost of 1 pencil will be Rs \(16 \div 2\)

\[16 \div 2 = \boxed{8}\]

Read table of 2 till we get 16.

\[2 \times 8 = \boxed{16}\]

**Exercise 49**

1. The cost of 3 erasers is Rs 18. Find the cost of one eraser.
2. The price of 4 ball points is Rs 40. What is the price of one ball point?
3. The cost of 5 balls is Rs 35. Find the cost of one ball.
4. The cost of 10 brushes is Rs 100. What is the cost one brush?
5. The cost of 4 flowers is Rs 16. Find the price of one flower?
MEASUREMENT OF LENGTH

We can measure the length of different objects by using the informal units like handspan, walking step, pencil, stick and pieces of threads etc.

Handspan  Step  Cubit  Foot

Measurement of length of object by using these units is not exact. So, we use units of length which give us exact measurements.

Activity Collect these objects in your classroom. How many paper clips ( ) used in each case for measuring the objects?

<table>
<thead>
<tr>
<th>Objects</th>
<th>Measurement</th>
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<tbody>
<tr>
<td>![Image of pencil]</td>
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<tr>
<td>![Image of pencil sharpener]</td>
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<tr>
<td>![Image of pencil]</td>
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<tr>
<td>![Image of paintbrush]</td>
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Recognize, read and write standard units of length including abbreviations

Metre is the basic unit of length. We write “m” for metres. We measure the length of long things in metre. We measure the length of small things in centimetres. We write “cm” for centimetres. A metre is divided into 100 equal parts, each part is equal to 1 cm.

**Metre scale**

![Metre scale diagram]

1cm = 100cm

**Activity 1** Write the correct unit (m or cm) used to measure the following.

1. Length of a [image] is measured in ___________
2. Length of a [image] is measured in ___________
3. A piece of [image] used for your dress is measured in ___________
4. Height of a [image] is measured in ___________

**Teacher’s Note**
Teacher should explain the concept of standard units of measuring length. Teacher should show the metre scale in class and also draw the scale on the wall in the classroom.
Activity 2

Read and write the length of objects.

Length of table is 1m

Exercise 50

(A) Measure the length of objects and write it in centimetres:

(1)

(2)

(3)
Teacher’s Note
Teacher should help the students to solve the exercise according to given scale.

**Unit 3**

**MEASUREMENT OF LENGTH**

Measuring length of the lines with scale:

1. 4 cm

2. 

3. 

4. 

5. 

(B) Measure length of the lines with scale:
Find the correct unit used to measure the following:

1. The length of the table in your class
2. The length of your Maths book
3. The length of your pencil
4. The length of your eraser
5. The length of your class desk

Solve real life problems involving measurements

Activity: Whose length is greater?

- Length of school bus.
- Length of a book.
- Height of your classroom.
- Height of a glass of water.
- Measure of your own height.
- Measure of your teacher’s height.
- Length of a pencil.

Tick (✓) the object greater than 1 m.
UNIT 3

MEASUREMENT OF MASS / WEIGHT

Recognize the standard units of mass/weight, i.e. kilogram, gram.

We have already learnt about heavier and lighter thing or objects in class I.

**Activity 1** Tick (✓) the heavier and cross (✗) the lighter.

1. (1)
   - Teapot
   - Cup

2. (2)
   - Elephant
   - Rabbit

The basic standard unit of weight is gram. We write “g” for a gram. There are 1000 grams in one kilogram.

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

There are some machines which are used to weigh things.

**Teacher’s Note**

Teacher should explain the concept of measurement of mass through real life experience of students.
Read and write standard units of mass/weight including abbreviations

We use grams to measure light weight objects. Kilograms are used to weigh heavy objects. When we go for shopping, we see different weights in the shops.

Activity: Tick (✔️) the correct unit of weight:

(1) An An orange Weighs in ___ g or ___ kg

(2) A A goat Weighs in ___ kg or ___ g

(3) A A cucumber Weighs in ___ g or ___ kg

(4) A A watermelon Weighs in ___ kg or ___ g
Solve real life problems involving mass/weight

Activity
Arrange a physical balance and weights of 100 g, 200 g, 500 g, 1 kg and 2 kg. Also collect stones, books, copies and some other material things. Teacher should help the students to measure these things by using different weights.

Exercise 52

Write appropriate unit of weight of the following objects:

(1) A boy  
Kg

(2) A goat

(3) A sugar bag

(4) A pencil

(5) A ring

(6) A chalk

(7) A hen
MEASUREMENT OF CAPACITY

Compare capacity of different objects (jug, glass, cup etc.)

Take a glass and a bottle. Fill the glass with water and pour into the bottle. We will see that there is some space left in the bottle. It means the bottle can hold more water than the glass. In other words we can say that the capacity of the glass is less.

Activity
Tick (✓) the container that holds more quantity:

Exercise 53
Tick (✓) the object that holds more quantity and cross (✗) that holds less quantity.
Recognize, read and write standard units of capacity including abbreviations

Litre is the basic standard unit to measure capacity of the quantity of liquid. We write “l” for a litre and “ml” for millilitre.

\[1 \text{l} = 1000 \text{ml}\]

Liquids such as milk oil, juice, petrol, etc. are measured in litres.

Here are some containers.

Solve real life problems involving capacity/volume

In real life we bought milk, juice, oil and petrol in different quantities.
Exercise 54

(1) My mother filled 4 cups of milk from 1 litre.

How much milk will be required to fill 8 cups? ________________

(2) Sara pours 3 glasses of juice from a bottle of 1 litre. How much bottles of juice are required for 6 glasses.

(3) Ahmed pours 2 glasses of water from 1 litre jug? How many glasses required to pours such two jugs?

(4) Which is the better for filling the full capacity of bucket?

(1) 250 ml

(2) 500 ml
TIME

Know the number of hours in a day and number of minutes in an hour

Each day is divided into 24 equal, parts, each part is called an hour.

A clock tells us the time of the day. A day is divided into two equal halves of 12 hour clock. One half begins at midnight to noon (12 hours). The second half begins at 12 noon and ends at midnight (12 hours).

Analog clock

Long hand
Or
minute hand

Short hand
Or
hour hand

Activity
Write the correct numbers in boxes of the clock. Also write the time shown in the clock.

___ O’clock
Unit 4

TIME

There are 24 hours in each day. The hours hand makes two complete rounds every day.

- There are 60 minutes in an hour.
- There are 24 hours in a day.
- There are 7 days in a week.
- There are 4 weeks in a month.

Read and write the time from a clock in hours and minutes (with five minute intervals) e.g., read 8:15 as eight fifteen and 8:50 as eight fifty.

Look at this clock.

The hour hand is pointing to 5. The minute hand is pointing to 12. At this position, the time is 5:00 or 5’O clock

A clock has two hands. The long hand is the minute hand. It takes five intervals to move between one number to the next number. It complete one round in 60 minutes or 1 hour.

The short hand is the hour hand. It makes a complete round the clock in every hour 12 to 1, 1 to 2, 2 to 3, 3 to 4 and back to 12. It makes a complete round the clock in every twelve hours.
We read and write the time as:

**Six five**

6:05

**Four Forty five**

4:45

Exercise 55

Read and write the time in the given boxes.

**Four five**

4:05

**Eleven twenty five**

11:25

**Three ten**


**Six fifteen**


**Eight thirty five**


Teacher’s Note

Teacher should bring a clock in the classroom and move its hands at different positions to show time.
1. **Half past**
The minute hand is at 6.
The minute hand has moved half a circle from 12 to 6.
The time is **half past three** or write as **3:30**

2. **Quarter past**
Here, the minute hand points to 3.
The hour hand has moved a little bit from 5 towards 6. The minute hand has moved a quarter of a circle from 12 to 3.
We read, **it is quarter past 5** or write as **5:15**

3. **Quarter to**
Here the minute hand points to 9.
The hour hand is almost at 8.
The minute hand has moved three quarters from 12 towards 9.
We say that, **it is a quarter hour left to eight.** or write as **7:45**
Write time below each clock.

2'O clock or 2:00

___'O clock or __:__

Quarter past 3 or 3:15

Half past 3 or 3:30

Half past_____ or __:__

Quarter to 4 or 3:45

Quarter to______ or __:__

Recognize a.m. and p.m

There are 24 hours in a day. We can say:

12'O clock or 12:00

Time of morning is written as a.m. It starts from midnight and ends at Noon (12 hours).
Time of afternoon is written as p.m. It starts from Noon and ends at midnight (12 hours).

**Activity** Write a.m or p.m.

- Sunny takes his breakfast at 7:00 ______
- Bilal and Maria go to school at 7:45 ______
- Nasir takes his lunch at 1:30 ______
- Azam and Fouzia play at 5:15 ______
- Salman goes to bed at 10:00 ______
Draw hands of a clock to show time in hours and minutes (with five minute intervals)

**Exercise 57**

Draw hands of clock to show the time in hours and minutes, also write.

- 5:35
- 7:10
- 11:25
- 3:05
- 8:15
- 6:30
- 9:40
- 10:20
- 2:55

Teacher’s Note

Teacher should help the students to use sticks of match box for showing time in each clock.
Use solar calendar to find a particular date

Calendar
There are two types of calendars used in Pakistan.

(1) Solar Calendar (2) Lunar Calendar

Each of them has 12 months.

Activity
Put the months of solar calendar in order.

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Exercise 58

Answer the following questions orally according to the above Solar Calendar:

1. What is the day on your birthday? _______________________

2. On which date will we celebrate Independence day? ________

3. What date is on first Friday in the month of May? __________

4. What day is March 23rd? _________________________________

5. What day of the week does December start on?___________
Use lunar calendar to find a particular date

- It is also called the Hijra calendar, as it is related to the event of the migration made by Prophet Muhammad (P.B.U.H) from Makkah to Madina.
- There are 29 or 30 days in a lunar month depending upon the appearance of new moon.
- Lunar month’s date changes from sunset of one day before till sunset of next day.

**Name of Months in Lunar Calendar**

1. MUHARRAM
2. SAFAR
3. RABI-UL-AWWAL
4. RABI-UL-SANI
5. JAMADI-UL-AWWAL
6. JAMADI-UL-SANI
7. RAJAB
8. SHABAN
9. RAMZAN
10. SHAWWAL
11. ZIL QUAD
12. ZIL HAJ

**Answer the following questions orally:**

1. Identify the first month of Islamic year.
2. In which month Muslims fast?
3. Which is the last month of Islamic year?
4. In which month Muslims celebrated Eid-ul-Azha?

**Teacher’s Note**

Teacher should tell the students the name of the months of lunar calendar and help them to answers of given activity.
### Model Lunar Calendar

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### Exercise 59

**Answer the following questions orally:**

1. What day is Rajab 27th?
2. What is the day before 10th Muharram?
3. What is the day after 5th Zilquad?
4. On which date Muslims perform Hajj?
5. What is the date of Eid Melad-ul-Nabi (P.B.U.H)?
6. Which is the first month of Lunar Calendar?
7. Which month comes after Shaban?
TWO-DIMENSIONAL FIGURES

Identify the figures like square, rectangle, circle, semi-circle and quarter-circle

We have already learnt the basic geometrical shapes in class I.

Activity 1 Write the name of geometrical shape shown in each object.

A B C

Activity 2 Cut paper into circular shape.

Fold it into 2 equal parts.

We get two half circles. Each half circle is called a semi-circle.

When a circle is divided in four equal parts, we get four quarter-circle.

Exercise 60

(1) Join dots and write the names of the shapes.
2. Tick and name the figure on the right that looks like the figure on the left.

   - RECTANGLE

3. By putting small shapes inside the large shape, how many figures can be made?
Identify vertices and sides of a triangle, rectangle and square

TRIANGLE

Triangle has three sides and three vertices.

RECTANGLE

Rectangle has four sides and four vertices.

SQUARE

Square has four sides and four vertices.

Write number of sides and vertices.

It is a **Triangle**.
It has [ ] sides and [ ] vertices.

It is a [ ].
It has [ ] sides and [ ] vertices.

It is a [ ].
It has [ ] sides and [ ] vertices.
LINES AND CURVES

Differentiate between a straight line and a curved line

A tight rope represents straight line

and loose rope represents curved line.

Teacher’s Note
Teacher should explain straight and curved lines and also use other materials for providing exercise.
Tick (✓) the shapes representing straight line and cross (✗) the shapes of curved line.

(1) Movement of snake

(2) Loose position of string

(3) Edge of a door

(4) Edge of a blackboard

(5) Railway line

(6) Coil
Identification of straight and curved lines:

Activity 1  Tick the correct shape of given line drawings.

(1)  ✔ Straight Line  ❏ Curved Line

(2)  ❏ Straight Line  ✔ Curved Line

(3)  ❏ Straight Line  ❏ Curved Line

(4)  ❏ Straight Line  ❏ Curved Line

(5)  ❏ Straight Line  ❏ Curved Line

(6)  ❏ Straight Line  ❏ Curved Line

Exercise 63

Write how many straight and curved lines are given in the following figures.

(1)  Straight Lines.............. Curved Lines..............

(2)  Straight Lines.............. Curved Lines..............

(3)  Straight Lines.............. Curved Lines..............
Use straightedge/ruler to draw a straight line of given length (exclude fractional lengths)

Aamir draws a straight line of 5 cm by using a ruler.

Step 1:

Step 2:

Step 3:

Exercise 64

(1) Draw straight lines of following lengths with the help of ruler.

(1) 4 cm    (2) 6 cm    (3) 2 cm
(4) 3 cm    (5) 9 cm    (6) 7 cm

(2) Hina is drawing a straight line of 8 cm. Shafia is drawing another line of 9 cm. Show it practically whose line is smaller in length?

Teacher’s Note
Teacher should help the students to draw straight lines of different measurements to provide the practice of drawing lines.