

# Unit 8

## Properties of numbers and reasoning about numbers

Five daily lessons

National  
**Numeracy Strategy**

Year 4  
Spring term

### Unit Objectives Year 4

- |   |         |
|---|---------|
| <ul style="list-style-type: none"> <li>Recognise negative numbers in context (e.g. on a number line, on a temperature scale).</li> </ul>  | Page 14 |
| <ul style="list-style-type: none"> <li>Recognise and extend number sequences formed by counting from any number in steps of constant size, extending beyond zero when counting back.</li> </ul> | Page 16 |
| <ul style="list-style-type: none"> <li>Make and investigate a general statement about familiar numbers by finding examples that satisfy it.</li> </ul>  | Page 80 |
| <ul style="list-style-type: none"> <li>Explain methods and reasoning about numbers orally and in writing.</li> </ul>  | Page 76 |

This Unit Plan is designed to guide your teaching.

You will need to adapt it to meet the needs of your class.

### Resources needed to teach this unit:

- Resource sheet 8.1
- Resource sheet 8.2
- Resource sheet 8.3
- Resource sheet 8.4
- Resource sheet 8.5
- Resource sheet 8.6
- Resource sheet 8.7
- Activity sheet 8.1
- OHT 8.1
- OHT 8.2
- Large number cards, -5 to 5
- Whiteboards
- Number fans
- Counting stick
- Thermometer animation downloadable from website ([www.numeracy.org.uk](http://www.numeracy.org.uk))
- OHP – calculator
- Class set of calculators
- Thermometers

### Link Objectives

Year 3

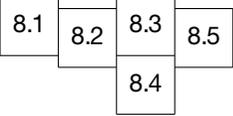
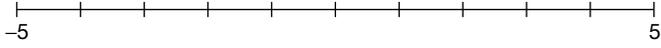
Year 5

- Order whole numbers to at least 1000** and position them on a number line.
- Describe and extend number sequences: **count on or back in tens or hundreds starting from any two- or three-digit number.**
- Investigate a general statement about familiar numbers by finding examples that satisfy it.
- Explain methods and reasoning** orally and, where appropriate, in writing.

- Order a given set of positive and negative integers** (e.g. on a number line, on a temperature scale).
- Recognise and extend number sequences formed by counting from any number in steps of constant size, extending beyond zero when counting back. For example: count on in steps of 25 to 1000, and then back; count on or back in steps of 0.1, 0.2, 0.3...
- Make and investigate a general statement about familiar numbers by finding examples that satisfy it.
- Explain a generalised relationship (formula) in words.
- Explain methods and reasoning.**

(Key objectives in bold)

department for  
**education and skills**

Planning sheet	Day One	Unit 8 <i>Properties of numbers and reasoning about numbers</i>	Term: <i>Spring</i>	Year Group: 4
<b>Oral and Mental</b>		<b>Main Teaching</b>		<b>Plenary</b>
<b>Objectives and Vocabulary</b>	<b>Teaching Activities</b>	<b>Objectives and Vocabulary</b>	<b>Teaching Activities</b>	<b>Teaching Activities / Focus Questions</b>
<p>Read and write whole numbers up to 10 000 presented in words and digits.</p> <p><b>RESOURCES</b> Resource sheet 8.1 Resource sheet 8.2 Resource sheet 8.3 Resource sheet 8.4 Resource sheet 8.5 Whiteboards</p>	<ul style="list-style-type: none"> <li>Display Resource sheets 8.1 to 8.5 in the following way:</li> </ul>  <p>Say a number and point to the words on the display: e.g. 'Three hundred and fifty-six'; 'Six thousand, nine hundred and one'.</p> <p>Ask children to write the numbers in digits on their whiteboards.</p> <p>Write a number in digits on the board, ask children to say the number and a volunteer to point to the words on the display. Write a number in digits and ask children to write the number in words on their whiteboards.</p>	<p>Recognise negative numbers in context, e.g.:</p> <p>on a number line on a temperature scale</p> <p><b>VOCABULARY</b> negative positive above and below zero minus</p> <p><b>RESOURCES</b> Thermometers Activity sheet 8.1 Large number cards -5 to 5 Thermometer animation</p>	<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">Q Where would you see/use negative numbers?</div> <ul style="list-style-type: none"> <li>Introduce negative numbers through the context of temperature. Compare temperatures of different resources, central heating, a fridge, a freezer. Compare climates and discuss times of year when temperature was below zero. Look at a room and other thermometers together, pointing out the negative values.</li> <li>Draw a vertical number line on the board with zero marked in the middle and 5 divisions above, 5 divisions below. Ask children to count on from zero as you point to the appropriate divisions above it on the line, then back to zero. Point to the -1 position.</li> </ul> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">Q What does this mark represent?</div> <p>Establish it is a negative one and repeat for the other negative values. Explain that numbers above zero are positive numbers, numbers below zero are negative numbers. Give examples of above and below freezing. Write all the numbers (-5 to 5) alongside the line. Ask the class to count back from 5 to -5, then up to 5. <li>Draw a horizontal number line:</li>  <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">Q Which whole numbers lie between -5 and 5?</div> <p>In response to each suggestion, point along the line, asking children to tell you when to stop. <li>Extend the line to -6 and 6. Ask the class to count back from 6 to the other end of the line. Hand out cards -5 to 0 inclusive. Ask the children to come out and position themselves in order. Repeat with cards, from -5 to 5 using different children to order themselves.</li> <li>Give out Activity sheet 8.1. Ask children to complete the number lines. Collect answers.</li> <p>Discuss the four thermometers. Explain that each thermometer tells the temperature in degrees Celsius and 0°C is freezing point. Ask children to fill in the missing temperatures.</p> </p></p>	<ul style="list-style-type: none"> <li>Discuss the activity and check the answers.</li> <li>Using the interactive thermometer, ask children to look at the third thermometer on Activity sheet 8.1. Ask questions such as the following for them to answer orally, demonstrate their responses with the interactive thermometer.</li> </ul> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">Q What will the temperature be if it rises by 3°C?</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">Q What will it be if it drops by 2°C?</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">Q What temperature is 3 degrees below zero or freezing point?</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">Q What temperature is 2 degrees above negative 6 degrees?</div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><b>By the end of the lesson the children should be able to:</b></p> <ul style="list-style-type: none"> <li><b>Order a set of positive and negative numbers;</b></li> <li><b>Locate positive and negative numbers on a number line;</b></li> <li><b>Use negative numbers in the context of temperature.</b></li> </ul> <p>(Refer to supplement of examples, section 6, pages 14.)</p> </div>



Planning sheet	Day Three	Unit 8 <i>Properties of numbers and reasoning about numbers</i>	Term: <i>Spring</i>	Year Group: <i>4</i>
<b>Oral and Mental</b>		<b>Main Teaching</b>		<b>Plenary</b>
<b>Objectives and Vocabulary</b>	<b>Teaching Activities</b>	<b>Objectives and Vocabulary</b>	<b>Teaching Activities</b>	<b>Teaching Activities / Focus Questions</b>
<p>Read and write numbers up to 10 000.</p> <p>Round three-digit numbers to the nearest 10 or 100.</p> <p>VOCABULARY nearest ten nearest hundred round up round down</p> <p>RESOURCES number fans</p>	<ul style="list-style-type: none"> <li>Return to the display of Resource sheets 8.1 to 8.5. Point to a number and ask children to read the number aloud as you point. Ask children to write the number in digit form on the board.</li> </ul> <div data-bbox="353 427 741 491" style="border: 1px solid black; padding: 2px;"> <p><b>Q</b> What is 1000 more/ 100 less than this number?</p> </div> <div data-bbox="353 512 741 596" style="border: 1px solid black; padding: 2px;"> <p><b>Q</b> What do you get when you add 200/ subtract 1000/ take away 50 from this number?</p> </div> <p>Ask children to say the answers aloud and to point to the numbers on the display as they do so.</p> <ul style="list-style-type: none"> <li>Remind children about the rules for rounding to the nearest 10, then the nearest 100.</li> <li>Write on the board a three-digit multiple of 10, e.g. 370. Ask children to suggest numbers that when rounded to the nearest 10 would give that number. Record them on the board.</li> </ul> <p>Repeat for a three-digit multiple of 100, asking children to give numbers that would make that number when rounded to the nearest 100.</p> <ul style="list-style-type: none"> <li>Provide other numbers for children to use number fans to show numbers that would round to them.</li> </ul> <div data-bbox="353 1155 741 1219" style="border: 1px solid black; padding: 2px;"> <p><b>Q</b> How many possible numbers are there that would round to 460?</p> </div> <div data-bbox="353 1240 741 1283" style="border: 1px solid black; padding: 2px;"> <p><b>Q</b> What about 300?</p> </div> <p>Collect answers and discuss strategies.</p>	<p>Make and investigate a general statement about familiar numbers by finding examples that satisfy it.</p> <p>VOCABULARY consecutive multiple example pattern</p>	<ul style="list-style-type: none"> <li>Write <math>1 + 2 + 3</math> on the board.</li> </ul> <div data-bbox="1050 328 1780 371" style="border: 1px solid black; padding: 2px;"> <p><b>Q</b> What sort of numbers are these?</p> </div> <p>Ask children to find the total. Record it then write</p> $2 + 3 + 4 =$ $3 + 4 + 5 =$ $4 + 5 + 6 =$ $5 + 6 + 7 =$ <p>Ask children to describe the list, copy the list and, record each total. Ask children to continue the pattern of calculations by three lines or more.</p> <ul style="list-style-type: none"> <li>Ask them to look at the totals.</li> </ul> <div data-bbox="1050 651 1780 694" style="border: 1px solid black; padding: 2px;"> <p><b>Q</b> Is there a pattern in the totals? Can you describe it?</p> </div> <div data-bbox="1050 715 1780 758" style="border: 1px solid black; padding: 2px;"> <p><b>Q</b> How might you explain it to someone?</p> </div> <p>Establish that the totals are consecutive multiples of 3, starting at 6.</p> <ul style="list-style-type: none"> <li>Agree the general statement: 'The sum of any three consecutive numbers is a multiple of 3' and write it on the board.</li> </ul> <p>Ask the children to find further examples to satisfy the statement. Encourage them to try larger numbers.</p> <ul style="list-style-type: none"> <li>Discuss results, ask for some examples and establish that the general statement appears to be true.</li> </ul> <div data-bbox="1050 1034 1780 1098" style="border: 1px solid black; padding: 2px;"> <p><b>Q</b> Is it true for every set of three consecutive numbers? Can we see any relationships?</p> </div> <div data-bbox="1050 1118 1780 1161" style="border: 1px solid black; padding: 2px;"> <p><b>Q</b> Is there a relationship between the totals and the numbers in each set?</p> </div> <ul style="list-style-type: none"> <li>Encourage children to offer reasons and explanations. Look at the adding of 1 to each number to get the next three consecutive numbers and the property that the sum of three consecutive numbers is <math>3 \times</math> the middle number.</li> </ul> <div data-bbox="1050 1283 1780 1347" style="border: 1px solid black; padding: 2px;"> <p><b>Q</b> Can you use the rule to work out the sum of <math>29 + 30 + 31</math> without adding them together?</p> </div> <p>Ask children to add groups of five consecutive numbers <math>1 + 2 + 3 + 4 + 5</math>, <math>2 + 3 + 4 + 5 + 6</math> etc. and look for any patterns. Encourage them to make a general statement and test it by using other examples, e.g. <math>101 + 102 + 103 + 104 + 105</math>.</p>	<ul style="list-style-type: none"> <li>Discuss children's findings and agree statements for each case.</li> </ul> <div data-bbox="1861 352 2177 459" style="border: 1px solid black; padding: 2px;"> <p><b>Q</b> Can you think of a statement for the sum of any odd number of consecutive numbers?</p> </div> <p>Discuss, allowing time for children to collectively formulate the wording for the statement, with your help if necessary.</p> <div data-bbox="1861 596 2177 660" style="border: 1px solid black; padding: 2px;"> <p><b>Q</b> What numbers could we use to test the statement?</p> </div> <p>Collect answers and check the children's calculations.</p> <div data-bbox="1832 767 2177 1038" style="border: 1px solid black; padding: 5px;"> <p><b>By the end of the lesson the children should be able to:</b></p> <ul style="list-style-type: none"> <li><b>Find examples that match a general statement;</b></li> <li><b>Make and explain a general statement.</b></li> </ul> <p>(Refer to supplement of examples, section 6, page 80.)</p> </div>

<b>Oral and Mental</b>	<b>Main Teaching</b>	<b>Plenary</b>
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<b>Objectives and Vocabulary</b>	<b>Teaching Activities</b>	<b>Objectives and Vocabulary</b>	<b>Teaching Activities</b>	<b>Teaching Activities / Focus Questions</b>
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<p>Recall multiplication facts in the 3 and 4 times table.</p> <p>Begin to recall multiplication facts in the 6 times table.</p> <p style="text-align: right; font-weight: bold; margin-top: 20px;">VOCABULARY</p> <p>multiply product</p>	<ul style="list-style-type: none"> <li>Play 'Ping Pong' for <math>\times 4</math> facts. The teacher sets a rhythm with the children as shown below, then gives a number for children to give the <math>\times 4</math> product within the rhythm set. Repeat the start number twice to consolidate the product.</li> </ul> <table style="margin-left: 40px; border: none;"> <tr> <td style="padding-right: 20px;"><i>Teacher</i></td> <td><i>Children</i></td> </tr> <tr> <td>ping</td> <td>pong</td> </tr> <tr> <td>ping</td> <td>pong</td> </tr> <tr> <td>ping</td> <td>pong</td> </tr> <tr> <td>3</td> <td>12</td> </tr> <tr> <td>3</td> <td>12</td> </tr> <tr> <td>7</td> <td>28</td> </tr> <tr> <td>7</td> <td>28</td> </tr> <tr> <td>5</td> <td>20</td> </tr> <tr> <td>5</td> <td>20</td> </tr> </table> <ul style="list-style-type: none"> <li>Repeat for <math>3 \times</math> facts. Introduce the 6 times table. Start in order 1 to 10, then randomly.</li> </ul>	<i>Teacher</i>	<i>Children</i>	ping	pong	ping	pong	ping	pong	3	12	3	12	7	28	7	28	5	20	5	20	<p>Make and investigate a general statement about familiar numbers by finding examples that satisfy it.</p> <p>Recognise and extend number sequences.</p> <p style="text-align: right; font-weight: bold; margin-top: 20px;">VOCABULARY</p> <p>sequence multiple rule predict</p>	<ul style="list-style-type: none"> <li>Write a starting number on the board, e.g. 4. Write 'the rule is <math>+3</math>'.</li> </ul> <p>Discuss the rule and how to generate the sequence using the rule.</p> <p>Get children to recite the sequence formed, i.e. 4, 7, 10, 13, 16, 19, 22.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><b>Q</b> Is 34 in our sequence?</p> </div> <p>Continue counting to establish 34 is in the sequence.</p> <p>Write <math>34 = 4 + (\square \times 3)</math>.</p> <p>Discuss this with the children and establish 10 goes in the box. Emphasise that you are adding on a multiple of 3.</p> <p>Repeat for other sequences.</p> <ul style="list-style-type: none"> <li>Present this problem to the class:</li> </ul> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><b>Q</b> How many squares will there be in the 10th cross?</p> </div> <div style="text-align: center; margin: 10px 0;"> </div> <p>Give children time to read the question and with the class work through the stages shown below.</p> <p><b>Recording</b></p> <table border="1" style="margin-left: 40px; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Cross</th> <th>Squares</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>5</td> </tr> <tr> <td>2</td> <td>9</td> </tr> <tr> <td>3</td> <td>13</td> </tr> <tr> <td>4</td> <td>17</td> </tr> </tbody> </table>	Cross	Squares	1	5	2	9	3	13	4	17	<p><b>Identify the rule for the sequence <math>\times 4</math>.</b></p> <p><b>Statement</b></p> <p>1st cross <math>\rightarrow 1 + (1 \times 4)</math>          2nd cross <math>\rightarrow 1 + (2 \times 4)</math>          3rd cross <math>\rightarrow 1 + (3 \times 4)</math></p> <p><b>Test</b></p> <p>10th cross <math>\rightarrow 1 + (10 \times 4)</math></p> <ul style="list-style-type: none"> <li>In pairs get children to investigate and record in the same way, the number of posts needed to make a fence.</li> </ul> <div style="text-align: center; margin: 10px 0;"> </div> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><b>Q</b> Where have you seen a sequence like this before?</p> </div> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><b>Q</b> Can we write each statement as <math>1 + (\square \times 4)</math>?</p> </div> <ul style="list-style-type: none"> <li>Ask children to investigate the number of posts used to build these huts:</li> </ul> <div style="text-align: center; margin: 10px 0;"> </div> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><b>Q</b> What is the rule for the huts? What statement can we make? How do we test it?</p> </div> <p>Collect responses and identify the rules and carry out tests with the children.</p>	<ul style="list-style-type: none"> <li>Draw on the board:</li> </ul> <div style="text-align: center; margin: 10px 0;"> </div> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><b>Q</b> Which table will generate this sequence?</p> </div> <p>Write on the board:</p> <p><math>1 + (\square \times ?)</math></p> <p>Test suggestions.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><b>Q</b> What shape or symbol could we use to generate a sequence using the 6 times table?</p> </div> <p>Give children two minutes to work in pairs with whiteboards.</p> <p>Collect ideas from the class and discuss, e.g.</p> <div style="text-align: center; margin: 10px 0;"> </div> <p>HOMEWORK – Practise six times table.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><b>By the end of the lesson the children should be able to:</b></p> <ul style="list-style-type: none"> <li>Investigate a problem by using the following skills:                     <ul style="list-style-type: none"> <li>recording</li> <li>identifying a sequence</li> <li>making a general statement</li> <li>testing the statement.</li> </ul> </li> </ul> <p>(Refer to supplement of examples, section 6, pages 76 and 80.)</p> </div>
<i>Teacher</i>	<i>Children</i>																																		
ping	pong																																		
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Planning sheet	Day Five	Unit 8 <i>Properties of numbers and reasoning about numbers</i>		Term: <i>Spring</i>	Year Group: 4								
Oral and Mental		Main Teaching			Plenary								
Objectives and Vocabulary	Teaching Activities	Objectives and Vocabulary	Teaching Activities		Teaching Activities / Focus Questions								
<p>Recall multiplication facts in 2, 3, 4 and 6 times tables.</p>	<ul style="list-style-type: none"> <li>Get the class to chant the 2 times table, saying each number statement twice. Repeat the chant this time saying the 2 times table followed by the 4 times table, i.e. <math>1 \times 2 = 2;</math>      <math>1 \times 4 = 4</math> <math>2 \times 2 = 4;</math>      <math>2 \times 4 = 8</math> <math>3 \times 2 = 6;</math>      <math>3 \times 4 = 12 \dots</math> Highlight the doubling process. <div style="border: 1px solid black; padding: 5px; margin: 5px 0;">Q What table could help us learn our six times table?</div> </li> <li>Get the class to chant the 3 times table, saying each number statement twice. Repeat the chant but saying the 3 times table followed by the 6 times table, i.e. <math>1 \times 3 = 3;</math>      <math>1 \times 6 = 6</math> <math>2 \times 3 = 6;</math>      <math>2 \times 6 = 12</math> <math>3 \times 3 = 9;</math>      <math>3 \times 6 = 18 \dots</math> Remind the children that the numbers in the 6 times table are double the numbers in the 3 times table.</li> <li>Play 'Ping Pong' to practise 2, 3, 4 and 6 times tables. Set a rhythm then give numbers for children to respond with products as shown below: (<math>\times 3</math>)    <i>Teacher</i>    <i>Children</i> ping      pong ping      pong ping      pong 5        15 9        27</li> </ul>	<p>Make and investigate a general statement about familiar numbers by finding examples that satisfy it. Explain methods and reasoning.</p> <p>VOCABULARY multiple factor</p> <p>RESOURCES OHT 8.2 Resource sheet 8.7 OHP calculator Class set of calculators</p>	<ul style="list-style-type: none"> <li>Remind children of homework. Ask the class to count in 6s from zero to 60. Show OHT 8.2 and ask class to count in 6s again. <div style="border: 1px solid black; padding: 5px; margin: 5px 0;">Q How does OHT 8.2 help you with this counting?</div> </li> <li>Establish that the last column in the table helps as these numbers are multiples of 6. <div style="border: 1px solid black; padding: 5px; margin: 5px 0;">Q What can you say about the other columns?</div> </li> <li>Establish that the 2nd, 4th and 6th columns are multiples of 2, the 3rd and 6th columns are multiples of 3.</li> <li>Give out Resource sheet 8.7. <div style="border: 1px solid black; padding: 5px; margin: 5px 0;">Q What can you say about columns in the first and second table?</div> </li> <li>Identify the columns that have multiples of 2, 4 and 5. Explain that you are going to use an L-shape to cover three numbers on the first table and then add these three numbers. Demonstrate using the three numbers: <table style="margin: 10px auto;"><tr><td style="border: 1px solid black; padding: 2px;">22</td><td></td></tr><tr><td style="border: 1px solid black; padding: 2px;">26</td><td style="border: 1px solid black; padding: 2px;">27</td></tr></table> </li> <li>With the OHP calculator show children how to find the sum of <math>22 + 26 + 27 = 75</math>. <div style="border: 1px solid black; padding: 5px; margin: 5px 0;">Q What do we know about this number?</div> </li> <li>Identify the number on the other two tables to establish that 75 has factors 5 and 3. Use the OHP calculator to confirm this. Make the statement: <div style="border: 1px solid black; padding: 5px; margin: 5px 0;">Q Are your numbers multiples of 5 and multiples of 3?</div> </li> <li>Collect responses and get the class to amend the statement, using calculators to confirm that the numbers are not always multiples of 5. 'The sum of three numbers in an L-shape is always a multiple of 3'. Ask children to find other examples that test this. Collect some examples to confirm the statement.</li> <li>Explain that you want the children to use the second table and this time cover four numbers using a <math>2 \times 2</math> square. Demonstrate using <table style="margin: 10px auto;"><tr><td style="border: 1px solid black; padding: 2px;">43</td><td style="border: 1px solid black; padding: 2px;">44</td></tr><tr><td style="border: 1px solid black; padding: 2px;">48</td><td style="border: 1px solid black; padding: 2px;">49</td></tr></table> </li> <li>and add the numbers with the OHP calculator. <math>43 + 44 + 48 + 49 =</math> Ask children to find sums of their own and make a statement they can test using examples of their own. Collect children's statements and gather them into a common statement that children can test with their own examples, e.g. 'In the second table the sum of four numbers in a <math>2 \times 2</math> square always has a factor of 4'.</li> </ul>		22		26	27	43	44	48	49	<ul style="list-style-type: none"> <li>Discuss the activity, ask for examples and record them on the board. <div style="border: 1px solid black; padding: 5px; margin: 5px 0;">Q If we extend the table to numbers larger than 100, will our statement still work?</div> </li> <li>Use an example from the extended table and with the children work through using the OHP calculator.</li> <li>Remind the children about their learning in this unit by asking them the following question. <div style="border: 1px solid black; padding: 5px; margin: 5px 0;">Q Tell me three things you have learnt in this unit.</div> </li> </ul> <p><b>By the end of the lesson the children should be able to:</b></p> <ul style="list-style-type: none"> <li>Find examples that match a general statement;</li> <li>Use their findings to make a general statement;</li> <li>Explain methods and reasoning orally and record work systematically.</li> </ul> <p>(Refer to supplement of examples, section 6, pages 76 and 80.)</p>
22													
26	27												
43	44												
48	49												

## Thousands

ONE THOUSAND

TWO THOUSAND

THREE THOUSAND

FOUR THOUSAND

FIVE THOUSAND

SIX THOUSAND

SEVEN THOUSAND

EIGHT THOUSAND

NINE THOUSAND

TEN THOUSAND

## Hundreds

ONE HUNDRED

TWO HUNDRED

THREE HUNDRED

FOUR HUNDRED

FIVE HUNDRED

SIX HUNDRED

SEVEN HUNDRED

EIGHT HUNDRED

NINE HUNDRED

AND

## Tens

NINETY

EIGHTY

SEVENTY

SIXTY

FIFTY

FORTY

THIRTY

TWENTY

## Teens

NINETEEN

EIGHTEEN

SEVENTEEN

SIXTEEN

FIFTEEN

FOURTEEN

THIRTEEN

TWELVE

ELEVEN

TEN

## Units

NINE

EIGHT

SEVEN

SIX

FIVE

FOUR

THREE

TWO

ONE

# Grids









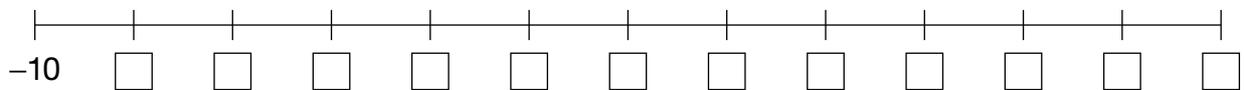
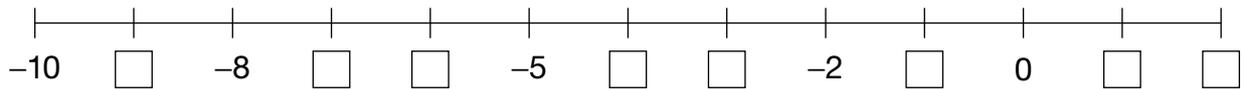
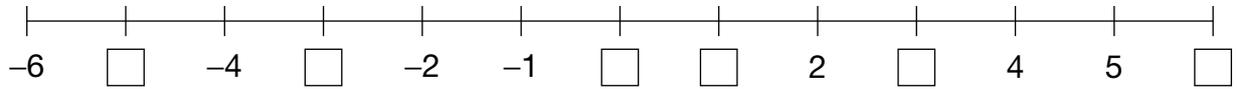




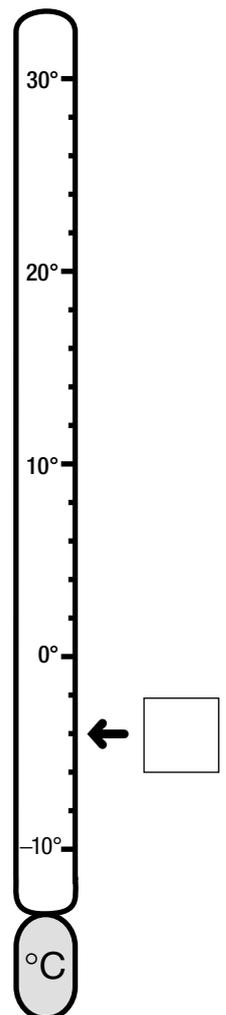
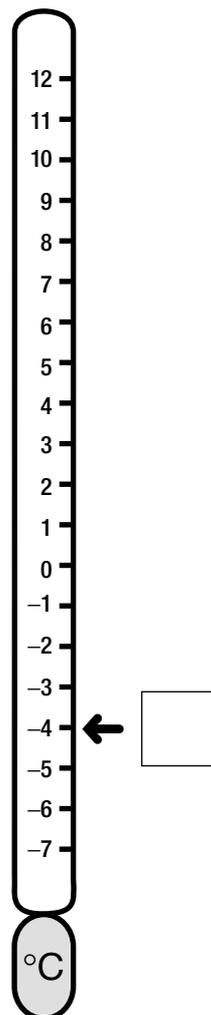
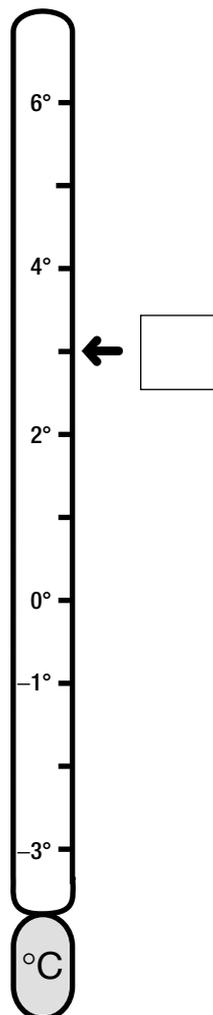
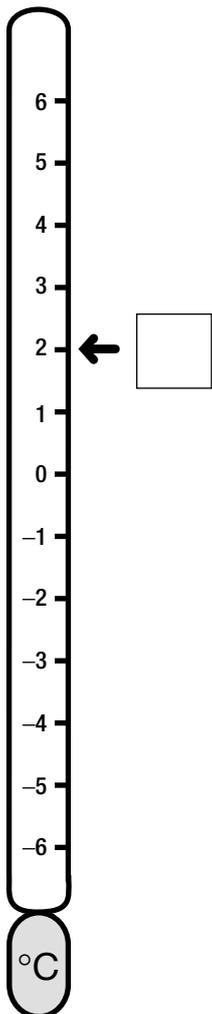
1	2	3	4	1	2	3	4	5	1	2	3	4	5	6
5	6	7	8	6	7	8	9	10	7	8	9	10	11	12
9	10	11	12	11	12	13	14	15	13	14	15	16	17	18
13	14	15	16	16	17	18	19	20	19	20	21	22	23	24
17	18	19	20	21	22	23	24	25	25	26	27	28	29	30
21	22	23	24	26	27	28	29	30	31	32	33	34	35	36
25	26	27	28	31	32	33	34	35	37	38	39	40	41	42
29	30	31	32	36	37	38	39	40	43	44	45	46	47	48
33	34	35	36	41	42	43	44	45	49	50	51	52	53	54
37	38	39	40	46	47	48	49	50	55	56	57	58	59	60
41	42	43	44	51	52	53	54	55	61	62	63	64	65	66
45	46	47	48	56	57	58	59	60	67	68	69	70	71	72
49	50	51	52	61	62	63	64	65	73	74	75	76	77	78
53	54	55	56	66	67	68	69	70	79	80	81	82	83	84
57	58	59	60	71	72	73	74	75	85	86	87	88	89	90
61	62	63	64	76	77	78	79	80	91	92	93	94	95	96
65	66	67	68	81	82	83	84	85	97	98	99	100	101	102
69	70	71	72	86	87	88	89	90	103	104	105	106	107	108
73	74	75	76	91	92	93	94	95	109	110	111	112	113	114
77	78	79	80	96	97	98	99	100	115	116	117	118	119	120

# Negative numbers

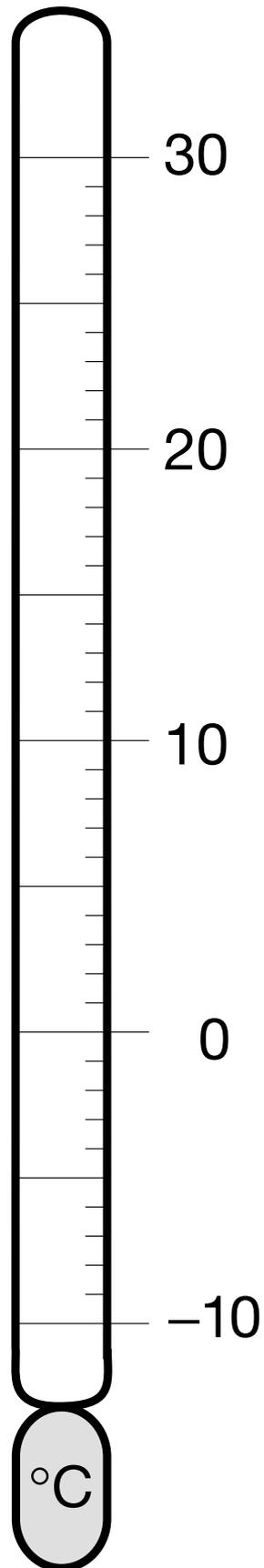
Write the missing numbers.



Write the temperature shown on each thermometer.



# Thermometer



1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36
37	38	39	40	41	42
43	44	45	46	47	48
49	50	51	52	53	54
55	56	57	58	59	60
61	62	63	64	65	66
67	68	69	70	71	72
73	74	75	76	77	78
79	80	81	82	83	84
85	86	87	88	89	90
91	92	93	94	95	96
97	98	99	100	101	102
103	104	105	106	107	108
109	110	111	112	113	114
115	116	117	118	119	120