

Canonbury Home Learning

Year 6 Maths

Developing/ Expected/ Greater depth activity

Lesson 4

LO: TBAT solve word problems.

Task: This week you will be designing a Lunar theme park.

Success Criteria:

- | |
|--|
| 1. Complete yesterday's costings activities. |
| 2. Read the profit and loss brief. |
| 3. Calculate your losses and profits. |

Negative Numbers

A negative number is any number that is less than zero. Negative numbers are denoted by a minus sign, -.

The number line below shows the integers, or whole numbers, from -10 to 10.

Numbers to the left on a number line are smaller than those to their right. The value of negative numbers decreases from right to left. For example, -7 is less than -2.

Real-life examples of negative numbers include:
Temperature | Bank Balances

The following rules apply when adding or subtracting negative numbers.

Adding a negative number is the same as subtracting. It produces a lower value.

$$2 + -3 = -1$$

If you add a negative number, you move to the left on a number line.

Subtracting a negative number is the same as adding. It produces a higher value.

$$4 - -2 = 6$$

If you subtract a negative number, you move to the right on a number line.

The following rules apply when multiplying or dividing negative numbers.

$2 \times -3 = -6$

Multiplying a positive number by a negative number (and vice versa) produces a negative number.

$21 \div -3 = -7$

Dividing a positive number by a negative number (and vice versa) produces a negative number.

$-2 \times -3 = 6$

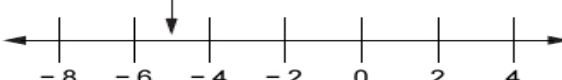


Multiplying two negative numbers produces a positive number.

$-18 \div -3 = 6$

Dividing a negative number by a negative number produces a positive number.

Year 6 Maths

Main activity

Task 1	Task 2	Task 3																																																																																														
<p>Problem solving TBAT solve problems involving negative numbers.</p> <p>Q1. Here is part of a number line. Write the number shown by the arrow.</p> <div style="text-align: center; margin: 10px 0;"> <div style="border: 1px solid black; width: 100px; height: 30px; margin: 0 auto;"></div> <div style="text-align: center; margin: 5px 0;">↓</div>  </div> <p>Q2. Carol has a rule for a sequence of numbers. Her rule is "The next number is the sum of the two previous numbers." Use Carol's rule to write in the three missing numbers.</p> <div style="text-align: center; margin: 10px 0;"> , , , 0, 1, 1, 2, 3, 5, 8, ... </div>	<p>Arithmetic</p> <div style="margin-bottom: 10px;"> 9 $\frac{1}{7} \times \frac{1}{3} =$ </div> <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> <div style="margin-bottom: 10px;"> 10 $\begin{array}{r} 75.83 \\ \times \quad 5 \\ \hline \end{array}$ </div> <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> <div style="margin-bottom: 10px;"> 11 $56.97 + 8.152 =$ </div> <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> <div style="margin-bottom: 10px;"> 12 $99,999 + 200 =$ </div> <div style="margin-bottom: 10px;"> 14 $600 \times 40 =$ </div> <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> <div style="margin-bottom: 10px;"> 15 $99,999 - 5,000 =$ </div> <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> <div style="margin-bottom: 10px;"> 16 $\begin{array}{r} 636,342 \\ - 217,838 \\ \hline \end{array}$ </div>	<p>Project Finding your profit and loss.</p> <div style="text-align: center; margin: 10px 0;">  Lunar THEME PARK  </div> <p>4. Profit and Loss! Each visitor to your theme park will spend;</p> <ul style="list-style-type: none"> • £5 at each café you have • £3 at each shop you have <p>Work out your total profit from the admission price (gate), cafes and shops. Then take away your total costs that you have already worked out and find your profit or loss for each day.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th rowspan="2" style="width: 5%;">Day</th> <th colspan="3" style="text-align: center;">Income</th> <th rowspan="2" style="width: 10%;">Total Costs (2)</th> <th rowspan="2" style="width: 10%;">Profit (1-2)</th> </tr> <tr> <th style="width: 15%;">Gate</th> <th style="width: 15%;">Cafe</th> <th style="width: 15%;">Shop</th> <th style="width: 15%;">Total (1)</th> </tr> </thead> <tbody> <tr><td>1</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>2</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>3</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>4</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>5</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>6</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>7</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>8</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>9</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>10</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>11</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>12</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>13</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>14</td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>	Day	Income			Total Costs (2)	Profit (1-2)	Gate	Cafe	Shop	Total (1)	1						2						3						4						5						6						7						8						9						10						11						12						13						14					
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Q3.

Here is a table of temperatures at dawn on the same day.

Temperatures °C	
London	-4°C
Moscow	-6°C
New York	-9°C
Paris	+6°C
Sydney	+14°C

What is the **difference** in temperature between **London** and **Paris**?

At noon the temperature in **New York** has **risen by 5°C**.

What is the temperature in **New York** at noon?

Q4.

Mark with arrows the points **-1.5** and **0.45** on the number line.

