

# Max's Minus Number Mountain

*Learning objective: To understand and use negative numbers in context, including counting back through zero.*

Read the information about Max the monkey's mountain adventure. Use the word bank to help you answer the questions below. Remember, when you go below sea level or below zero, the numbers get smaller!

Max the monkey is climbing the frosty peaks of the Great Crystal Mountain. At the base of the mountain, the temperature is  $5^{\circ}\text{C}$ . As Max climbs higher, the temperature drops by  $8^{\circ}\text{C}$ . Later, Max explores a deep, icy cave that is 3 metres below the mountain path. Max loves using maths to track his journey! He knows that when a number is less than zero, we call it a negative number. Whether he is measuring the temperature or the depth of a cave, Max uses his number line to help him count past zero.

*Word bank: Negative · Positive · Minus · Below zero · Integer · Difference · Decrease · Ascend · Descend · Number line*

**1. If the temperature at the mountain base is  $5^{\circ}\text{C}$  and it drops by  $8^{\circ}\text{C}$ , what is the new temperature? (2 marks)**

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**2. Max has  $\pounds 3$  in his pocket. He buys a hot chocolate for  $\pounds 5$ . How much money does he owe, and how would you write this as a negative number? (2 marks)**

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**3. A thermometer shows  $-2^{\circ}\text{C}$ . If the temperature rises by 4 degrees, what will the new temperature be? (2 marks)**

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**4. Explain why  $-10$  is smaller than  $-2$ . Use your knowledge of the number line to help you. (2 marks)**

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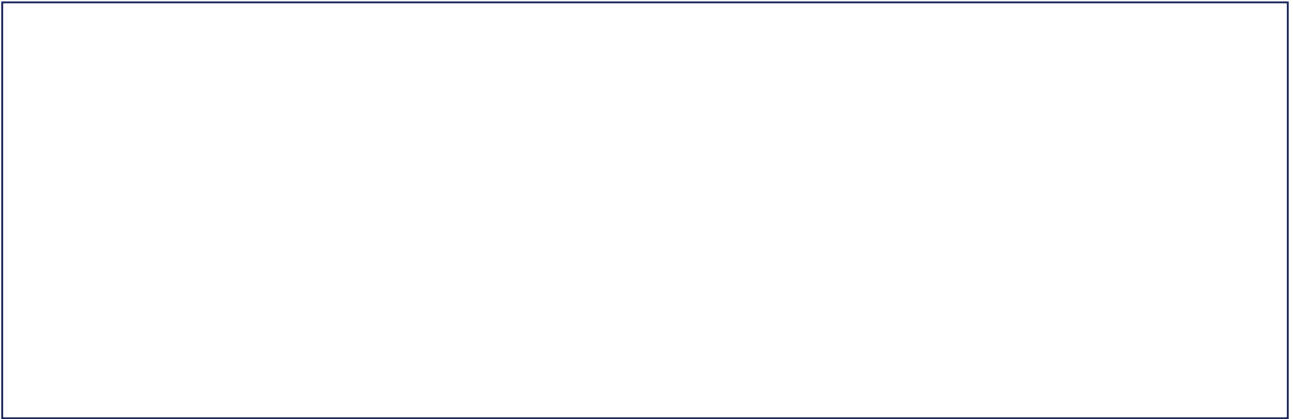
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5. Max starts at 1 and counts back 5 steps. What number does he land on? (2 marks)

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**Draw:** Draw a vertical number line that goes from -5 to 5. Label the 'zero' mark clearly and draw a small picture of Max standing on the number -3.



*Extension challenge: Max finds a hidden treasure chest 4 metres below the ground. If he climbs up 7 metres, where does he end up in relation to the ground level? Write a number sentence to show your thinking.*