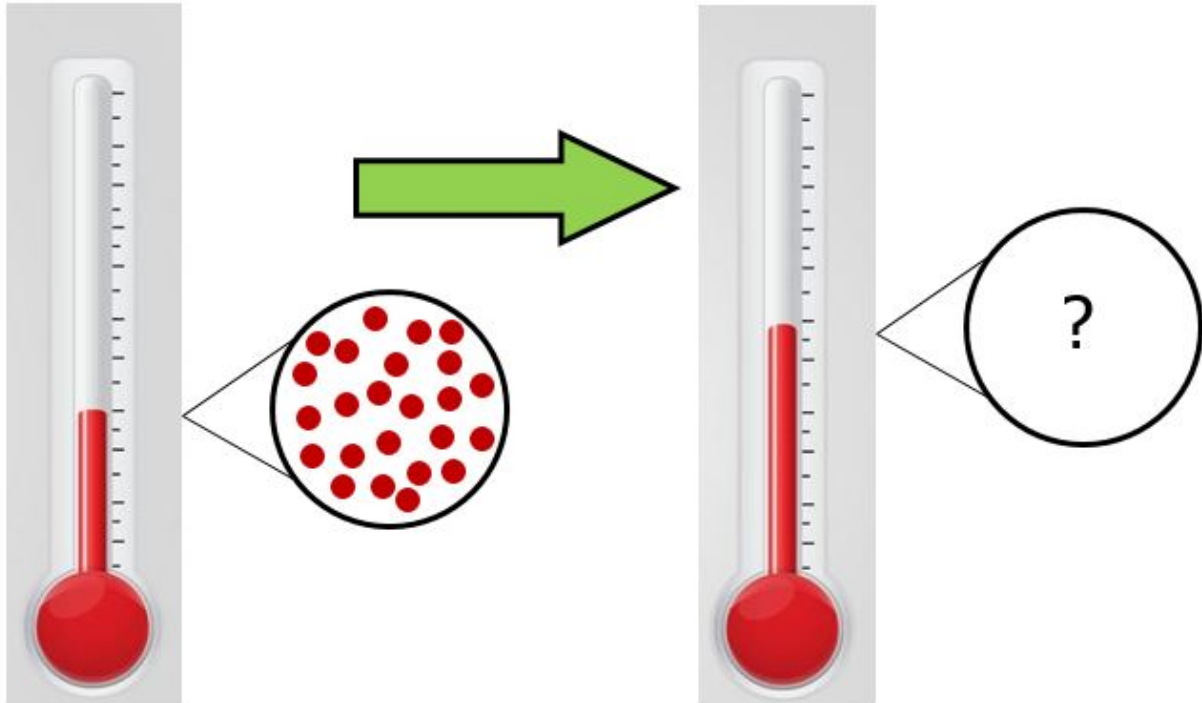


**Subject:** Grade 8 Natural Sciences  
**Topic:** Expansion and contraction of materials  
**Total:** 38 Marks

**Name:** \_\_\_\_\_  
**Date:** \_\_\_\_\_

This image refers to question: 1



**Question 1: Please Fill In The Blanks**

2 marks

**Expansion** and **contraction** of materials are used in every day items.  
In the picture, expansion and contraction is used in a thermometer.

Complete the sentence using the correct answer:  
The particles will (1) .

Possible Answers: become less. | move closer together. | become more. | move further apart.

<b>1</b>	<input type="text"/>
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**Question 2: Please Fill In The Blanks**

4 marks

Substances in all different states of matter - solids, liquids and gases - tend to (1) when they are heated and (2) when they are cooled.

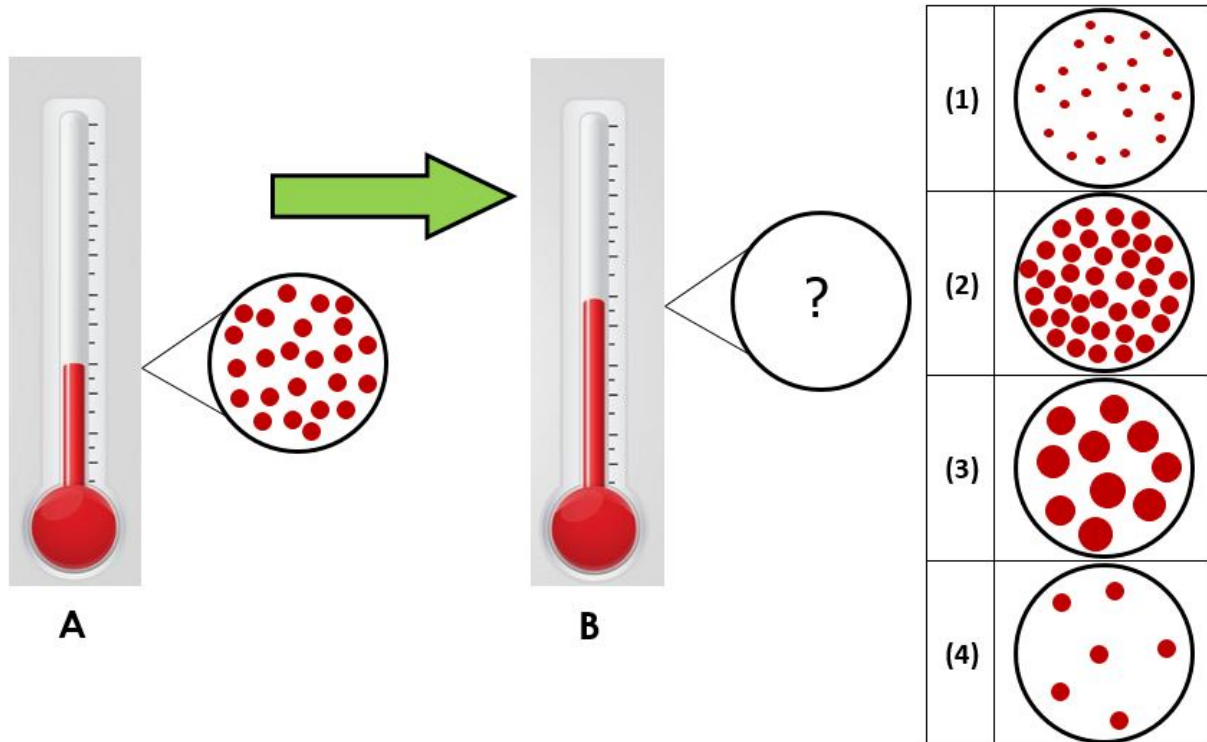
Answer in the order given in the question.

Possible Answers: contract | lose particles | expand | gain particles

<b>1</b>	
----------	--

<b>2</b>	
----------	--

**This image refers to question: 3, 4**



**Question 3: True/False**

2 marks

Study the image.

The arrow represents **added heat**.

<b>TRUE</b>
-------------

<b>FALSE</b>
--------------

**Question 4: Multiple Choice**

4 marks

Which diagram, from the table, best represents the particles in B?

- |          |     |
|----------|-----|
| <b>A</b> | (1) |
| <b>B</b> | (2) |
| <b>C</b> | (3) |
| <b>D</b> | (4) |
- 

**Question 5: Multiple Choice**

4 marks

What is the definition of the word **expand**?

- |          |  |
|----------|--|
| <b>A</b> | To remove, reducing the number/amount.           |
| <b>B</b> | To become larger, swell up, to increase in size. |
| <b>C</b> | To create more, add to the number/amount.        |
| <b>D</b> | To become smaller, reduce in size.               |
- 

**This image refers to question: 6**



**Question 6: True/False**

2 marks

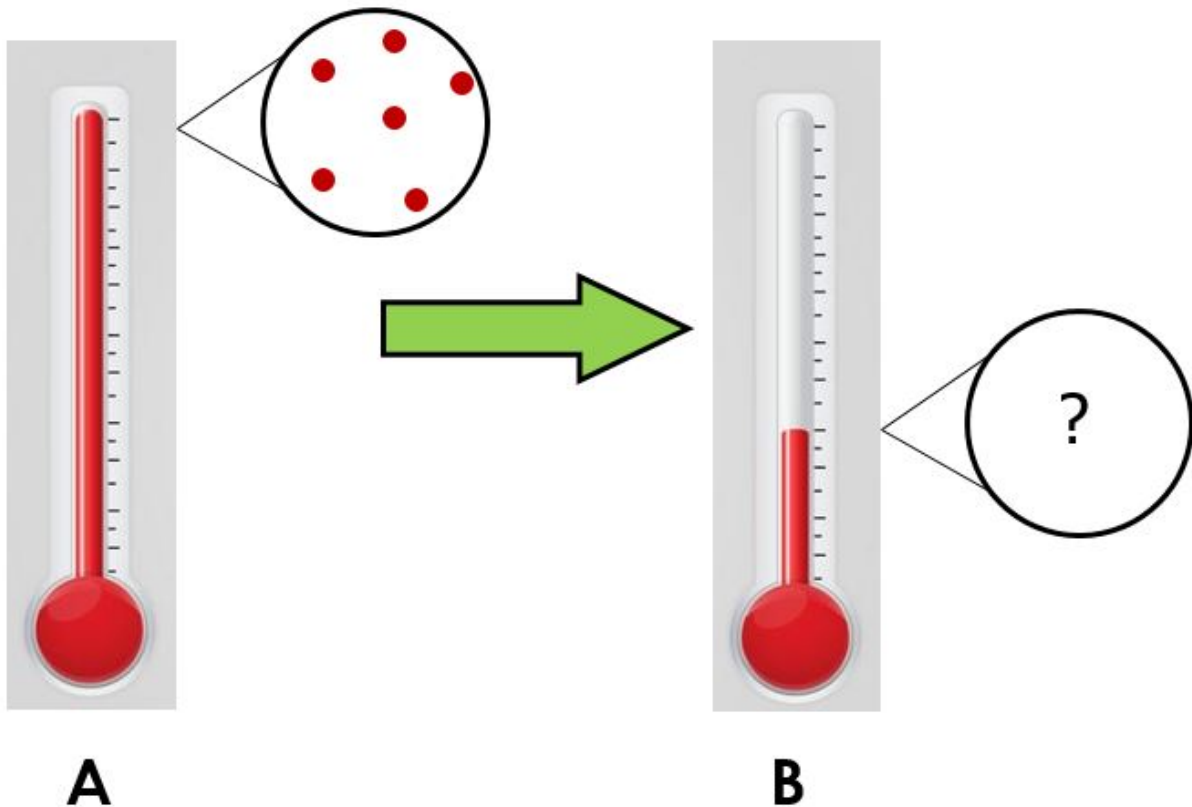
There is 500ml of liquid in the measuring cylinder.

The level of the liquid on the measuring cylinder will be higher on a hot day, due to the expansion of the glassware.

**TRUE**

**FALSE**

**This image refers to question: 7**



**Question 7: Please Fill In The Blanks**

10 marks

The particles in **A** are (1) due to (2) . To bring the temperature **down** to the level in **B**, the thermometer was placed in a (3) environment. This, then (4) causing the particles to (5)

Possible Answers: cooler | warmer | added energy | removed energy | further apart | move closer together

<b>1</b>	
<b>3</b>	
<b>5</b>	

<b>2</b>	
<b>4</b>	

**Question 8: Text Input**

3 marks

When a material is heated, the particles move faster and move further apart from each other. What has the particles, in the material, gained once it was heated?

Answer using only one word.

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**This image refers to question: 9**



**Question 9: Text Input**

3 marks

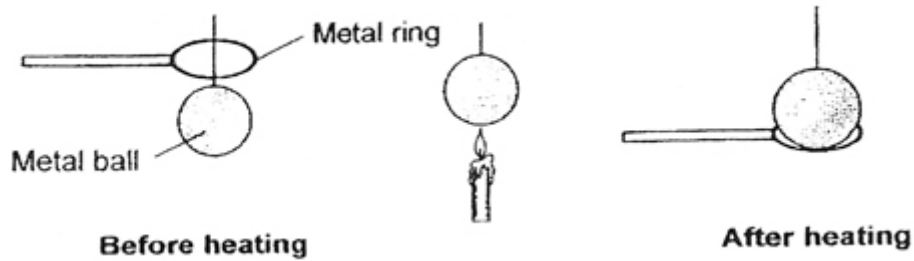
**Expansion** and **contraction** is essential in the construction of railway lines.

*Study the image and answer the question.*

The gap between the railway tracks (circled) allows for the metal to expand and contract.

Using **one word only**, what could cause the railway tracks to **expand**?

**This image refers to question: 10**



**Question 10: Multiple Choice**

4 marks

Refer to the *Ball and Ring Apparatus* in the picture.

At room temperature, the ball fits through the ring, but once the ball is heated, it cannot fit through the ring.

What has happened to the particles of the ball (solid)?

- |          |   |
|----------|---|
| <b>A</b> | The movement of the particles decreased and they moved closer together.   |
| <b>B</b> | The particles were heated so they move or vibrate less in the same place. |
| <b>C</b> | The movement of the particles increased and they moved further apart.     |
| <b>D</b> | The particles were cooled so they move or vibrate more in the same place. |

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**Total: 38 Marks**