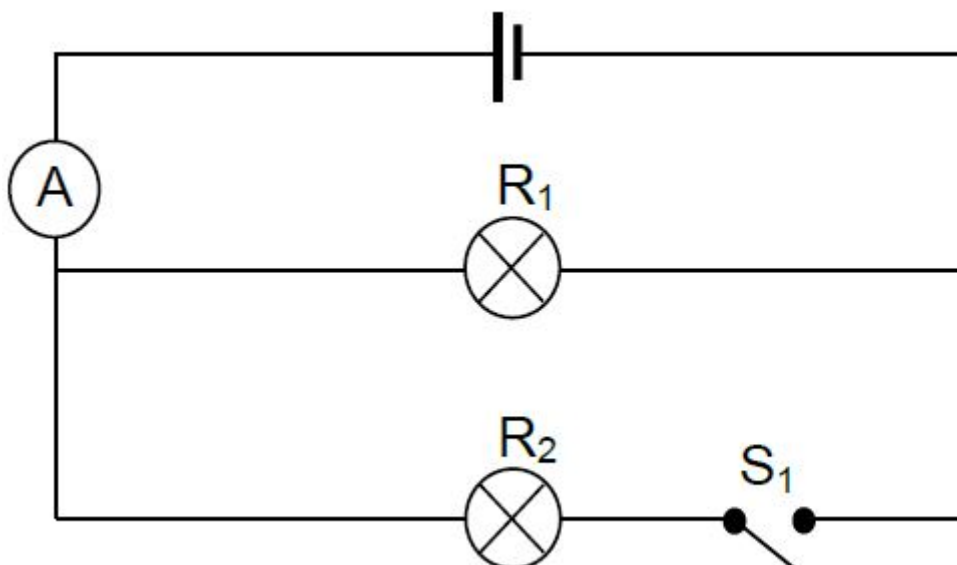




**Subject:** Grade 10 Physical Sciences  
**Topic:** Physical Sciences: Term 1 - Mini-exam  
**Total:** 14 Marks

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

This image refers to question: 1



**Question 1: True/False**

2 marks

$R_1$  and  $R_2$  are identical resistors that are connected as shown in the circuit diagram. The total current in the circuit is  $1,5\text{ A}$  when the **switch is open**.

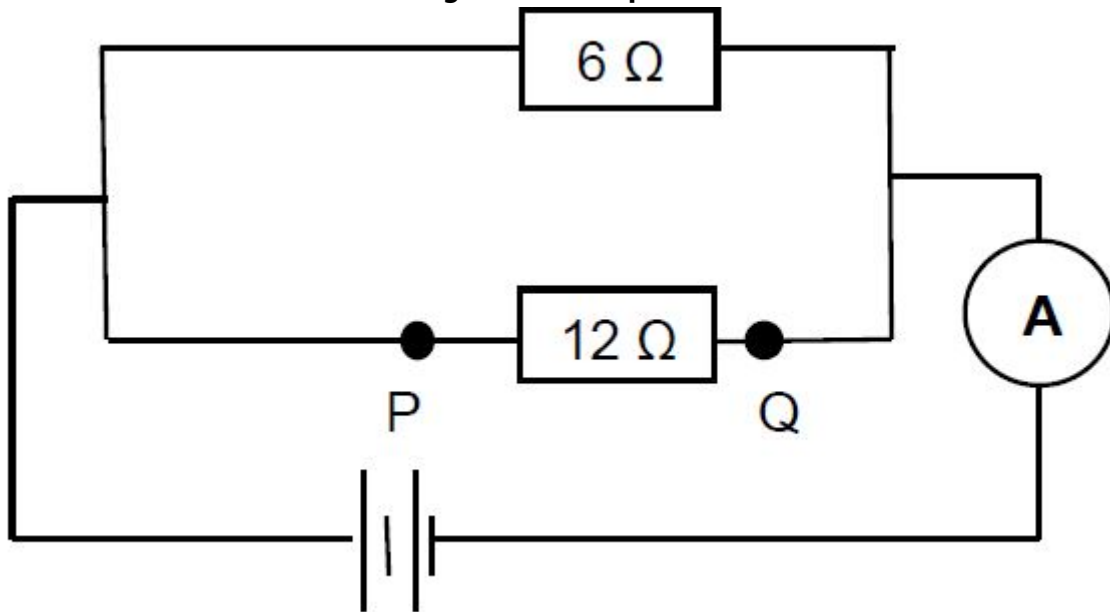
The reading on the ammeter would increase if the **switch is closed**?

**TRUE**

**FALSE**



This image refers to question: 2



**Question 2: True/False**

2 marks

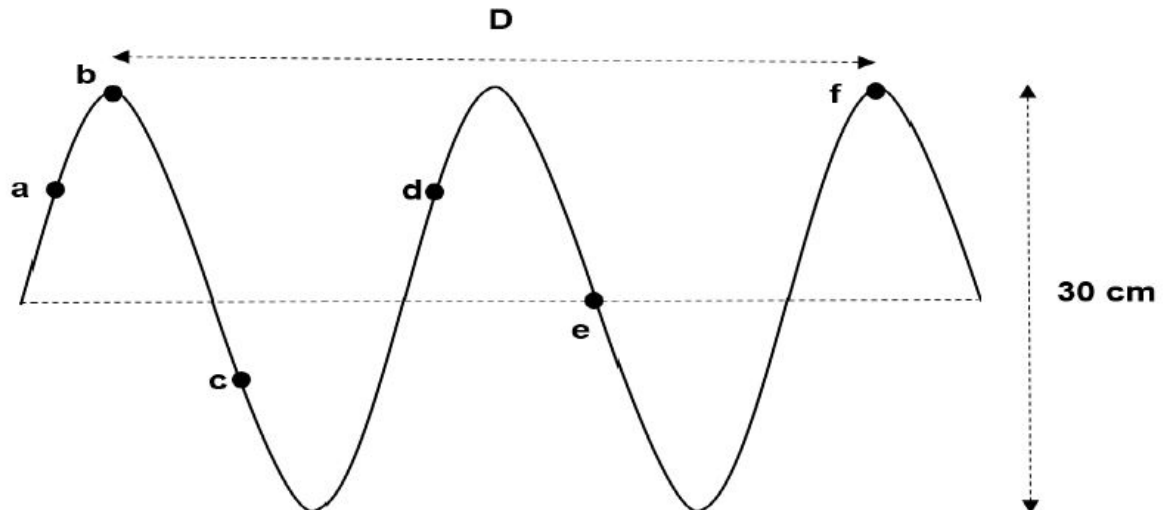
The circuit represented in the diagram has a 10 V battery which is connected to resistors as shown.

The potential difference between points PQ is 5 V.

**TRUE**

**FALSE**

This image refers to question: 3



**Question 3: True/False**

2 marks

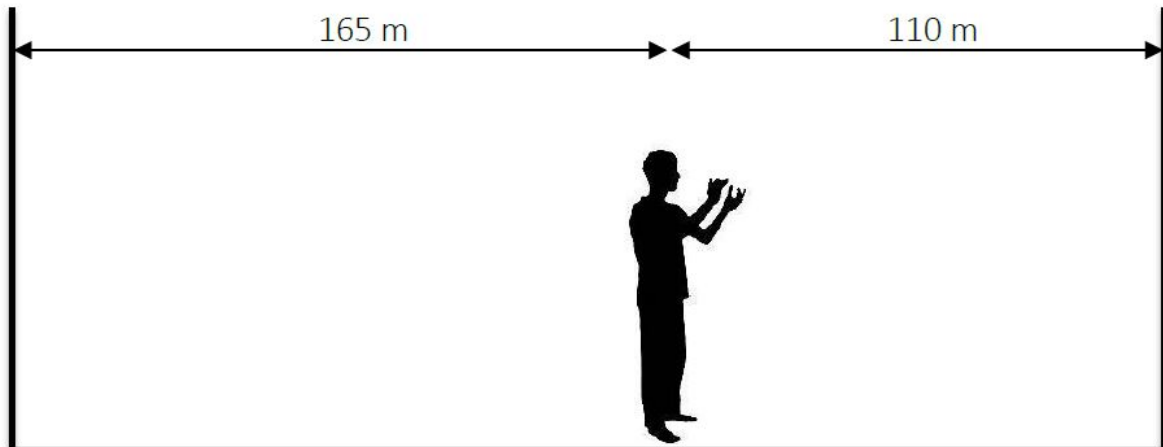
The vertical distance from the **crest to the trough** of the transverse wave is 30 cm. The distance (D) is 84 cm.

The amplitude of the wave is 30 cm and the wavelength is 33,6 cm.

TRUE

FALSE

**This image refers to question: 4**



**Question 4: True/False**

2 marks

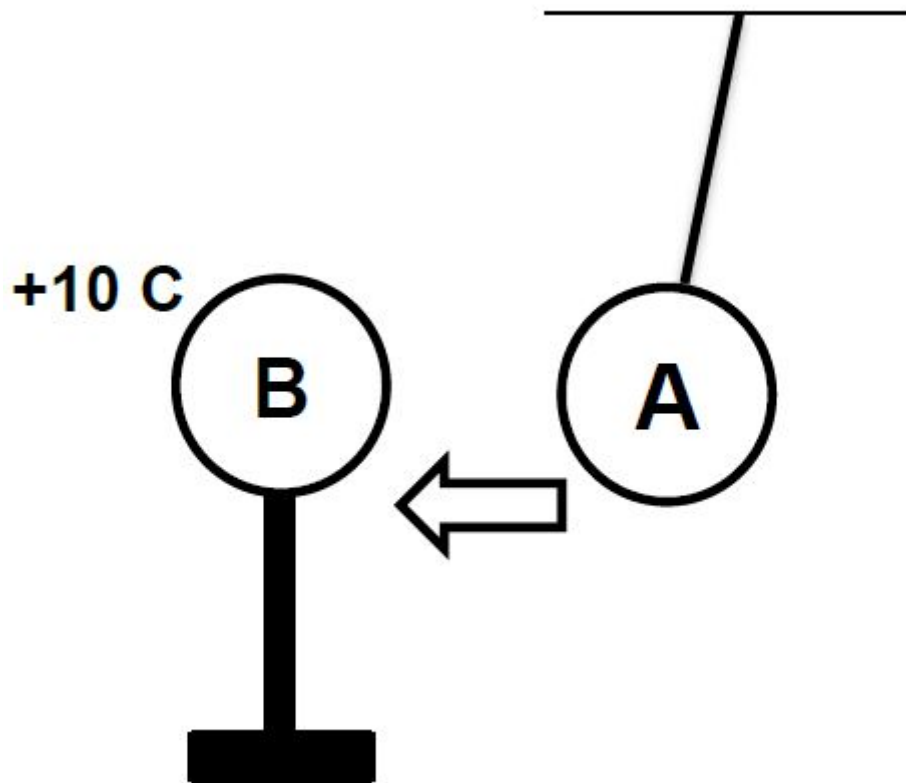
A boy stands between two walls, 165 m from the one wall and 110 m from the other wall. The boy claps his hands once and hears two clear echoes. The speed of sound in air is  $340 \text{ m} \cdot \text{s}^{-1}$ .

The difference in the time that the echoes are heard is 0,16 s.

**TRUE**

**FALSE**

This image refers to question: 5



**Question 5: True/False**

2 marks

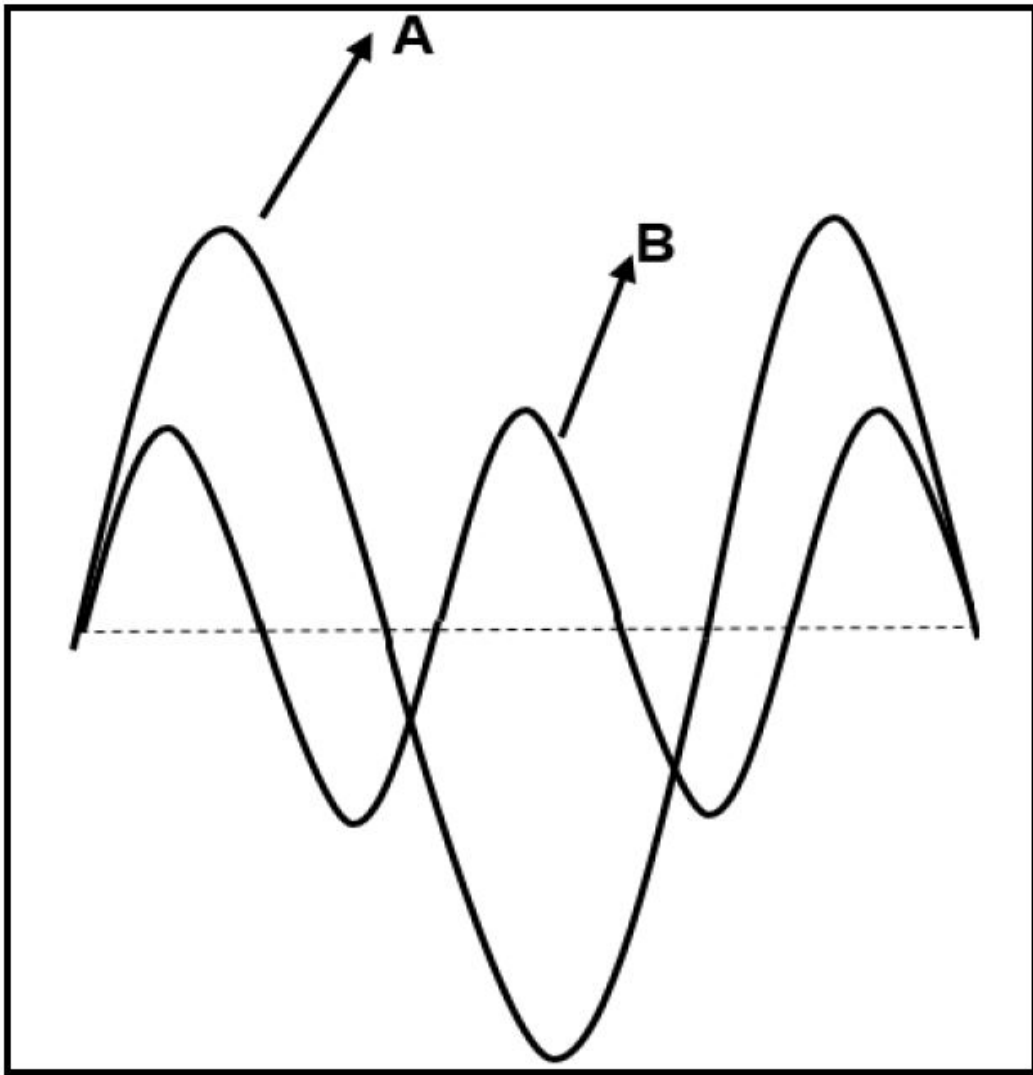
Sphere B with a charge of 10 C is placed on an insulated stand. Another charged sphere A is hanging on a string as shown in the diagram.

Sphere A is attracted to sphere B. Sphere A must have an excess of electrons.

**TRUE**

**FALSE**

This image refers to question: 6



**Question 6: True/False**

2 marks

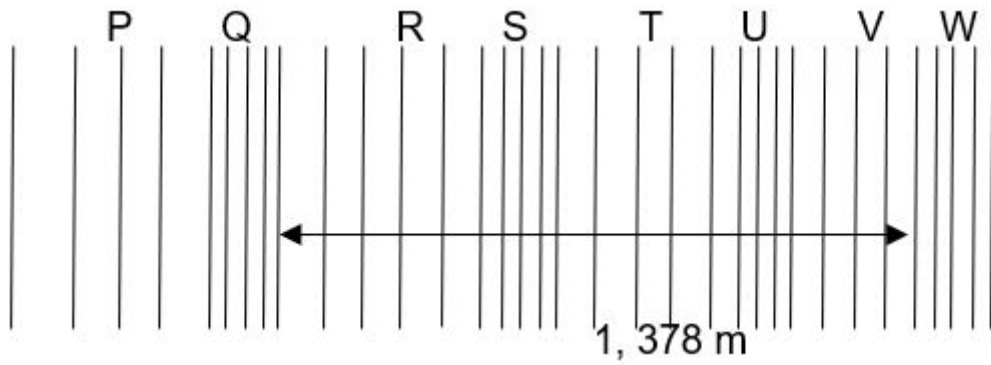
The following diagram represents the displacement-time graphs for two sound waves, A and B.

Sound wave A is louder than sound wave B, but has a lower pitch than sound wave B.

**TRUE**

**FALSE**

**This image refers to question: 7**



**Question 7: True/False**

2 marks

The diagram represents a longitudinal wave which was obtained from a loud sound. The distance between 2 compressions and 2 rarefactions is 1, 378 m.

The wavelength for this wave is 551, 2 mm.

**TRUE**

**FALSE**

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**Total:** 14 Marks