

## Topic 6 Pressure

### PAPER 1

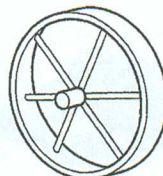
#### MULTIPLE-CHOICE QUESTIONS

For each question, there are four possible answers. Choose the one you consider correct and record your choice (A, B, C or D) in the brackets provided.

1. A farmer has two carts. The carts have the same weight, but one has four narrow wheels and the other has four wide wheels.



narrow wheel



wide wheel

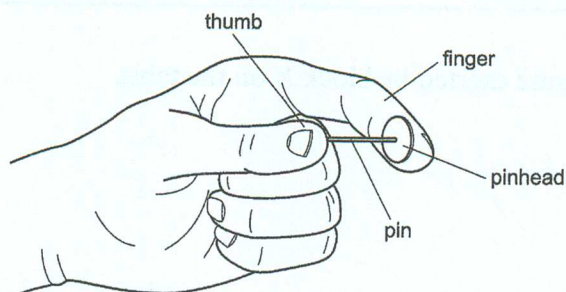
Which cart wheels sink less into soft ground, and what is the reason?

(2015/P1/Q8 / 2018/P1/Q8)

	cart wheels	reason
A	narrow	greater pressure on the ground
B	narrow	less pressure on the ground
C	wide	greater pressure on the ground
D	wide	less pressure on the ground

( )

2. A pin is squeezed between finger and thumb.



Which statement is correct?

(2016/P1/Q7)

- A The force of the pin is larger on the finger than on the thumb.  
B The force of the pin is larger on the thumb than on the finger.  
C The pressure of the pin is larger on the finger than on the thumb.  
D The pressure of the pin is larger on the thumb than on the finger.

( )

**PAPER 2****STRUCTURED QUESTIONS****Section A**

Answer the following questions in the spaces provided.

1. Two girls, **A** and **B**, of the same weight and wearing the shoes shown in the diagram, walk across some sand.

State why girl **B** leaves deeper marks in the sand.



shoes worn by girl **A**

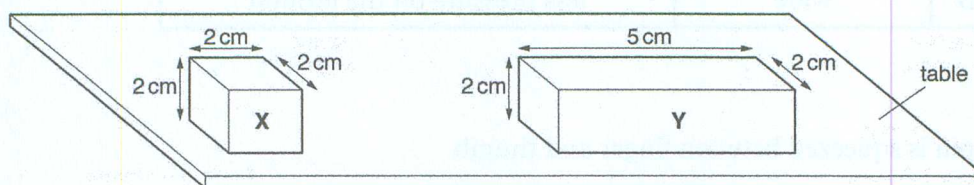


shoes worn by girl **B**

[1]  
(2014/P2/A2)

2. Two blocks, **X** and **Y**, are resting on a table. The dimensions of the blocks are shown in centimetres, cm.

Each block weighs 0.5 N.



Calculate the pressure exerted by block **X** on the table.

[1]  
(2017/P2/A1a)



3. A tractor which travels over soft and sandy ground has wide tyres.



Explain why the tyres on the tractor need to be wide to travel over the soft and sandy ground.

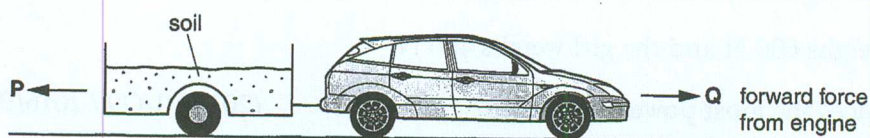
[2]

(2019/P2/A3)

### Section B

Answer the following questions.

1. A moving car is pulling a trailer full of soil.



The car has a mass of 1000 kg. The trailer and soil have a total mass of 180 kg.

The car and trailer stop and then accelerate uniformly along a straight road for 6 s.

The resultant force forwards is 2360 N.

The trailer has two tyres. Each tyre has a contact area with the road of  $150 \text{ cm}^2$ . Calculate the pressure the tyres exert on the road.

( $g = 10 \text{ N/kg}$ )

[2]

(2014/P2/B7d)