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Science Review Answer pack

Grade 8

<u>Agenda</u>

Pressure and moments

(Longman Physics p106-113)

Respiration

(Longman Biology p10-13)

Please complete booklets and bring to your next science class

Additional resources:

http://www.educationquizzes.com/

http://www.scibermonkey.org/level-ks3.html

http://studyjams.scholastic.com/studyjams/jams/science/index.htm

https://www.neok12.com/

Pressure and moments

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1 Which unit is used to measure pressure? Circle the correct answer.

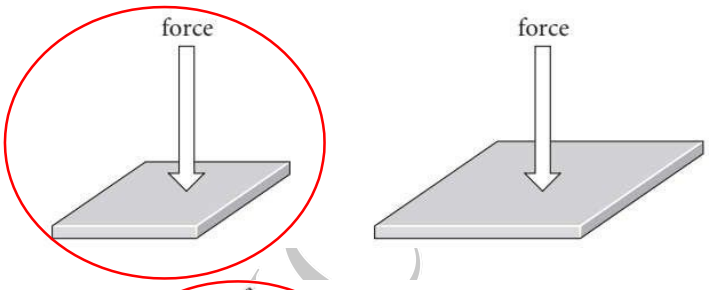
newtons per square metre	seconds	newtons	metres

2 Circle the objects that create low pressure by spreading out force over a large area.

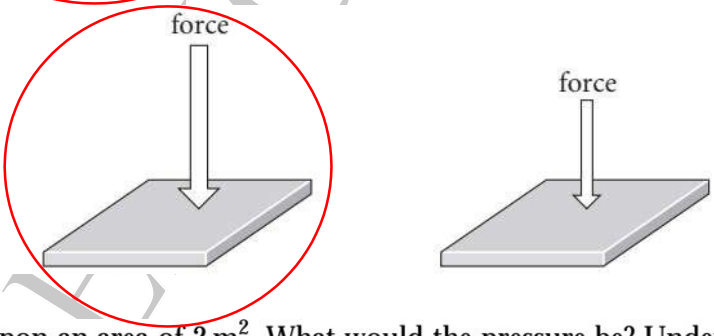
High heels	**Ice skates**	**Football boots**
Tyres	**Chopstick**	**Straw**

3 For each pair of diagrams, tick the one that will result in the larger pressure.

a



b



4 A force of 10 N acts upon an area of 2 m^2. What would the pressure be? Underline the correct answer.

a 5 N/m^2 **b** 10 m^2 **c** 10 N/kg **d** 20 Nm^2

5 For each of the following sentences, underline **true** or **false**.

a Liquids cannot be compressed. **true/false**

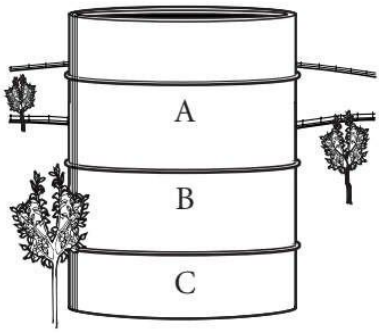
b Gases cannot be compressed. **true/false**

c The pressure is increased if more particles are added to a container. **true/false**

d The fewer the collisions between particles, the higher the pressure. **true/false**

Pressure and moments continued (2)

6 Look at the diagram of a water tower.

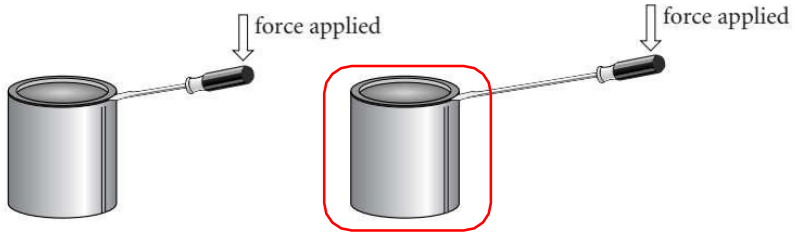


a At which point will the water be under the most pressure? C

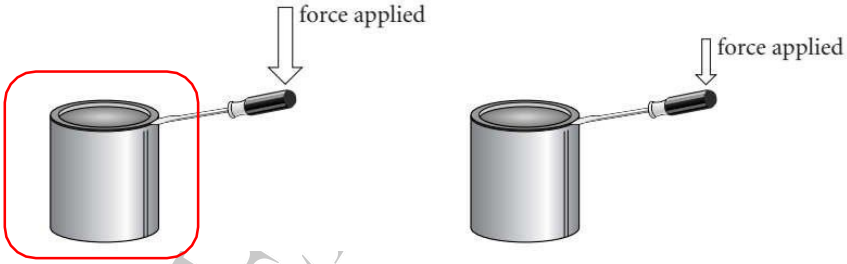
b At which point will the water be under the least pressure? A

7 For each pair of diagrams, tick the one that will result in the bigger turning effect.

a



b



9 The arm is an example of a lever. What is the name of the pivot of the arm? Underline the correct answer.

a biceps **b** triceps **c** forearm **d** elbow

10 **a** What is the name for the effect a force has when it is applied to one end of a lever and tries to turn the lever? Moment

b What two things affect how easy it is to use a lever?

1 Force applied

2 Distance from pivot

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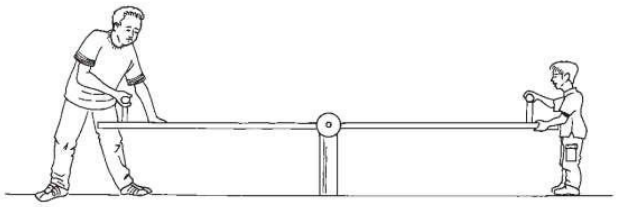
Pressure and moments continued (3)

11 What will happen to the seesaw when both people get on? Choose from the answers below.



A It will turn in a clockwise direction.

B It will balance.

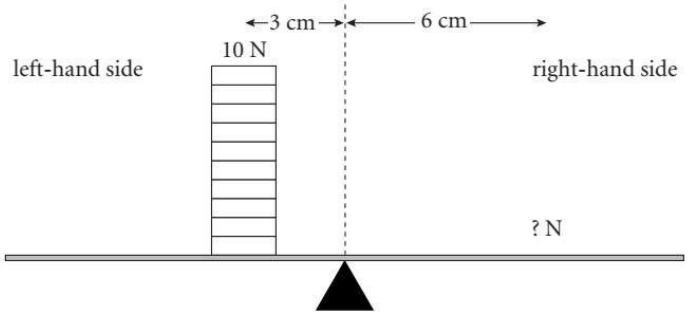
C It will turn in an anti-clockwise direction.

The correct answer is _ C _

12 The principle of moments says:

anti-clockwise moments = clockwise moments

Use this to calculate the size of the force needed on the right-hand side to balance the beam.



The force needed is 5 N _____

Respiration

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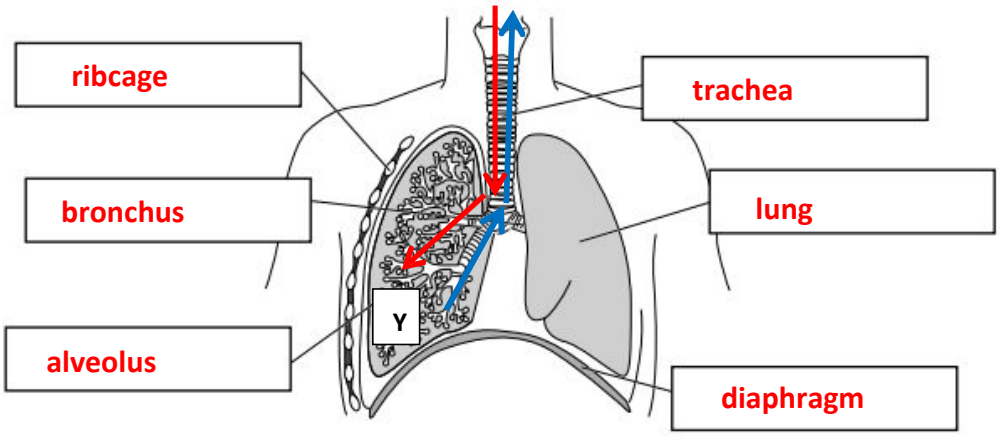
1 a Use the words below to label the diagram.



trachea	lung	bronchus	alveolus	ribcage	diaphragm

b i Draw arrows in one colour to show the route taken by air as you breathe in.

ii Draw arrows in a different colour to show the route taken by exhaled air.

iii Colour in the key:

inhaled air ↓

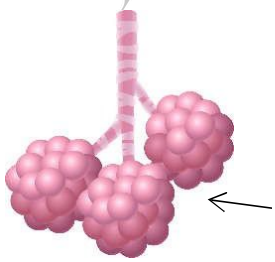
exhaled air ↑

c Mark with a Y where gaseous exchange takes place.

2 5 During gaseous exchange in the lungs, oxygen is taken into the bloodstream and carbon dioxide passes out. Alveoli have special features which allow gaseous exchange to happen easily.

Draw lines to match the following features with the reason why each one helps gaseous exchange.

Feature	Reason for feature
thin walls	gases can dissolve easily
network of blood capillaries	easy for gases to pass through
large surface area	gases can easily pass into blood
moist lining	a lot of gas can pass into the blood at once



Alveoli

Adapted from Heinemann Science