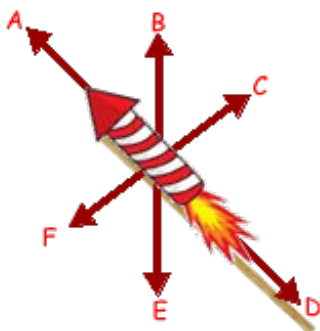


Questions about Speed, Distance & Time

1. A car travels 100meters in 50 seconds. What is its **speed**?
2. A boy rides a bike 500meters. It takes him 450 seconds. What is his speed? (write out the equation)
3. A girl rides 500 meters. It takes her 5mins. What is her speed? (Think about your units)
4. A sprinter runs 100meters. He runs at 12 meters per second. How much time did he take to run this distance?
5. A plane travels at a speed of 1000ms. How far will it travel in 15seconds

Questions about Forces

Q1. The diagram shows a firework rocket.



(a) Three forces act as the rocket flies through the air. Which arrows show the directions of these three forces?

3 marks

(b) When there is no fuel left, the rocket falls to the ground.

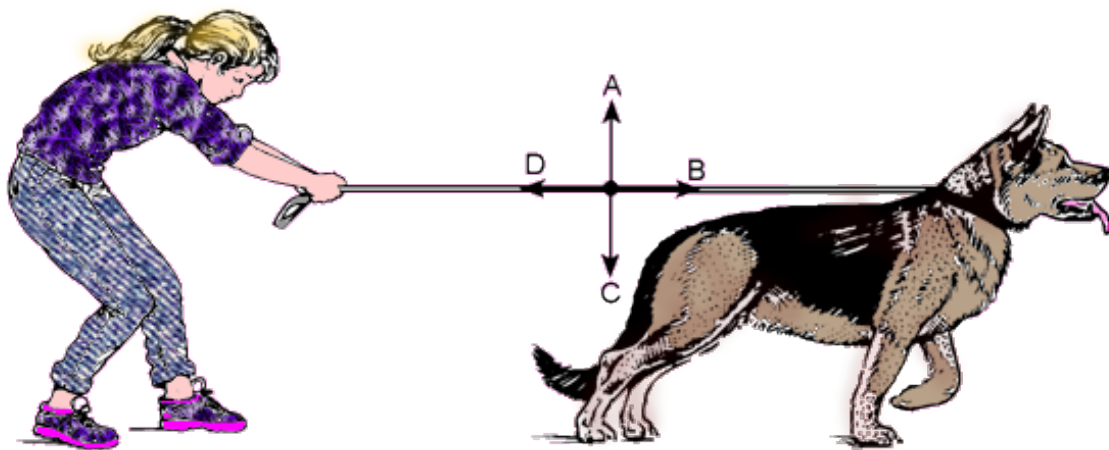
(i) Give the name of the force which pulls it down.

1 mark

(ii) Give the name of the force which acts against the motion of the rocket.

1 mark

Q2.



Q2.

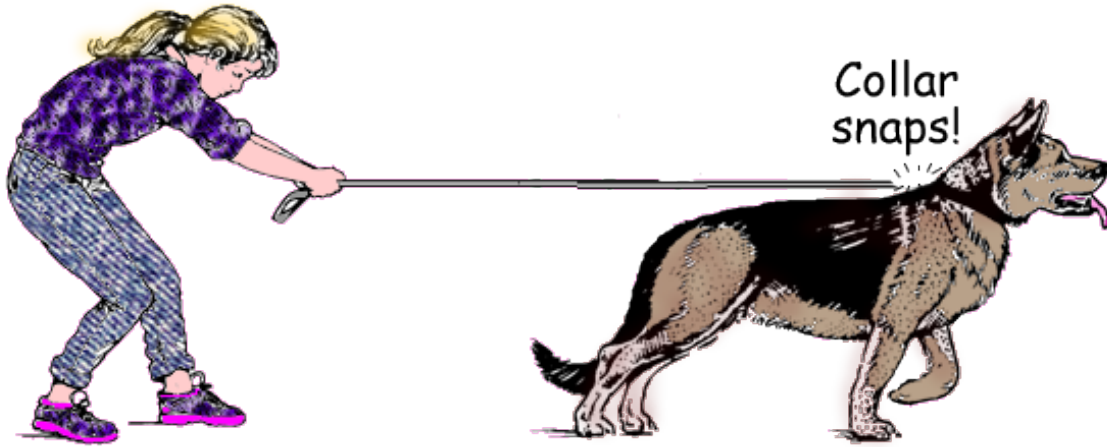
(a) Megan's dog is pulling on his lead. Which arrow, A, B, C or D, shows the direction of this force?

1 mark

(b) Megan has to pull to keep the dog still. Which arrow shows the direction of this force?
Give the letter.

1 mark

(c) Suddenly the dog's collar breaks.



(i) When the collar breaks, the lead moves. Draw an arrow on the diagram to show which way the lead starts to move.

1 mark

(ii) Why does the lead move when the collar breaks?

1 mark

Maximum 4 marks

(a) Megan's dog is pulling on his lead. Which arrow, A, B, C or D, shows the direction of this force?

1 mark

(b) Megan has to pull to keep the dog still. Which arrow shows the direction of this force? Give the letter.

1 mark

(c) Suddenly the dog's collar breaks.

(i) When the collar breaks, the lead moves. Draw an arrow on the diagram to show which way the lead starts to move.

1 mark

(ii) Why does the lead move when the collar breaks?

1 mark

Maximum 4 marks

Q3.

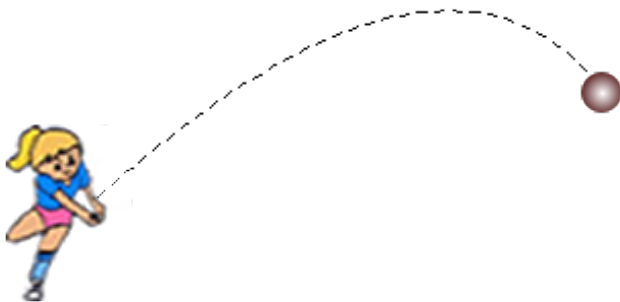
(a) Some of the statements in the list describe forces, and some do not.

Choose three statements that describe forces:

A	the movement of a car travelling along a road
B	the push of a jet engine on an aeroplane.
C	the flow of electricity through a light bulb.
D	the weight of a book on a table.
E	the pull of a horse pulling a cart.
F	the speed of a hockey ball flying through the air.

3 marks

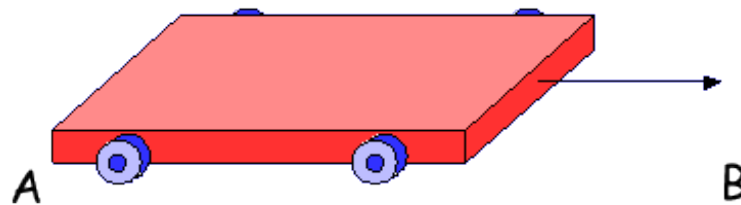
(b) A girl returns a volleyball. The diagram shows the path of the ball after she has returned it.



How can you tell from the path of the ball that there is a force acting on the ball?

1 mark

(c) The drawing shows a trolley rolling along a table from A to B. Then another force acts on the trolley. This is shown by the arrow on the drawing.



What effect does this force have?

W	It makes the trolley go faster.
X	It makes the trolley go slower.
Y	It makes the trolley change direction.
Z	It has no effect.

1 mark

Maximum 5 marks