

Science - Test Your Skills

Year 5 Forces



1. Dave goes over a jump on his skateboard. When he jumps he stays in the air for a short time.

What force makes him return to the ground?

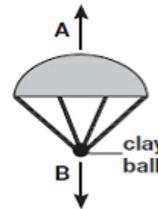


1 mark

2. Jamie has a parachute. The two arrows on the diagram below show two forces (A and B) acting on the falling parachute. Label forces A and B on the diagram.

A) Force A is

B) Force B is



1 mark

3. Tick **one** box to show the effect force A has on the parachute.

It makes the parachute fall faster. It makes the parachute heavier.

It makes the parachute fall slower. It makes the parachute lighter.

1 mark

4. Look at the diagram in question 2. **Circle** the correct statement below.

If force A is larger, the parachute will be falling at an increasing speed.

If force B is larger, the parachute will be falling at an increasing speed.

1 mark

5. Cross out the incorrect words in bold to complete the sentences below.

There is **lots of / not much** friction
between the children's hands and the rope.



Pulling a rope

There is **lots of / not** much friction
between the skates and the ice.

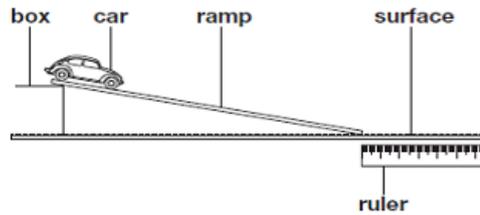


Ice skating

1 mark

6. Sue rolls a car down a ramp. She investigates how far the car travel along different surfaces before friction causes the car to stop.

Sue draws a table of the results.



Surface	Distance travelled by car (cm)		
	First try	Second try	Third try
tiles	105	72	107
carpet	50	46	45
paving stones	68	66	67
wooden floor	124	129	131

1 mark

Look at the table of results. Tick **one** box to show which surface caused the most friction.

- tiles
 carpet
 paving stones
 wooden floor

7. Complete the sentences below to explain why bikes use **gears to turn the wheel. Choose from the words below.**

smaller more bigger less

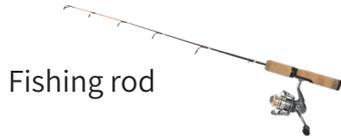
A small force pushing on the pedals is turned into a force on the wheels. This means you have to pedal..... to turn the wheel.

1 mark

8. Match each object below to the type of mechanism it uses:



Uses a pulley



Uses gears



Uses a lever

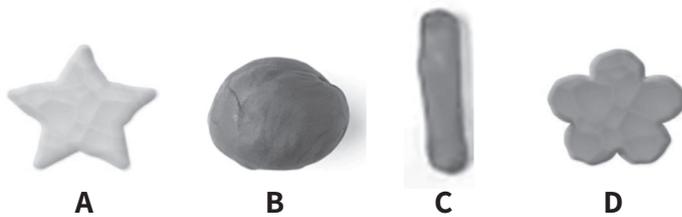
1 mark

9. Cross out the incorrect words in bold to complete the paragraph about streamlining.

Streamlined objects move **more / less** easily through water than those that aren't streamlined. This means they move through water **more / less** quickly. This is because there is less **air / water** resistance working against streamlined objects.

1 mark

10. Sam is about to drop four clay shapes into water. They are made from four equal pieces of clay but have been moulded into different shapes.



1 mark

Explain which shape you think will sink the fastest:

/10

Total