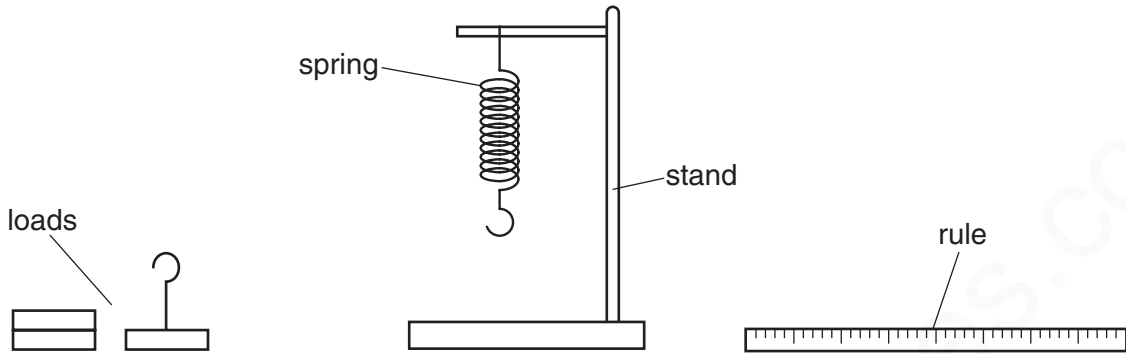
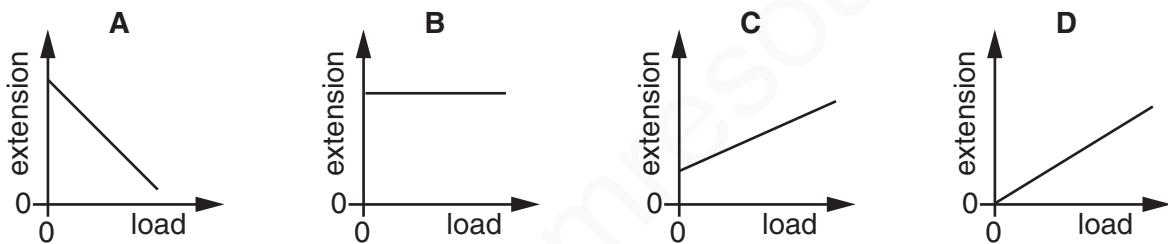


PAPER-2-FORCES-QP-SET-1

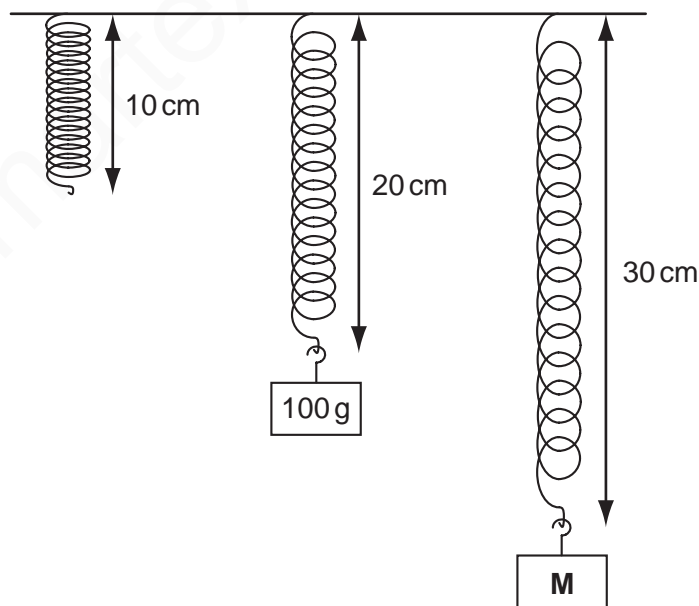
1 A spring is suspended from a stand. Loads are added and the extensions are measured.



Which graph shows the result of plotting extension against load?



2 Objects with different masses are hung on a 10 cm spring. The diagram shows how much the spring stretches.



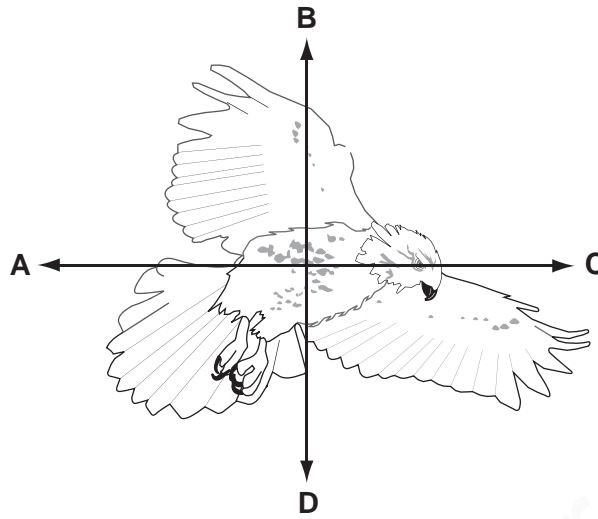
The extension of the spring is directly proportional to the mass hung on it.

What is the mass of object **M**?

- A** 110g **B** 150g **C** 200g **D** 300g

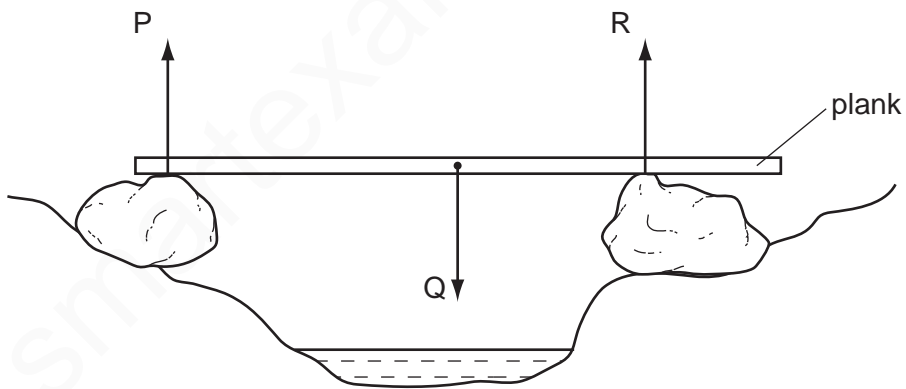
3

The diagram shows a bird in flight.
In which direction does the weight of the bird act?



4

A wooden plank rests in equilibrium on two boulders on opposite sides of a narrow stream. Three forces of size P, Q and R act on the plank.

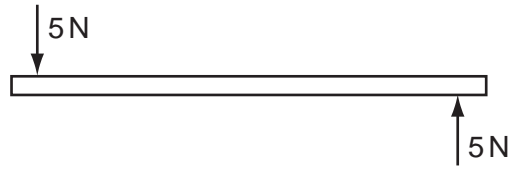


How are the sizes of the forces related?

- A $P + Q = R$
- B $P + R = Q$
- C $P = Q = R$
- D $P = Q + R$

5

A rod is acted upon by two forces as shown in the diagram.



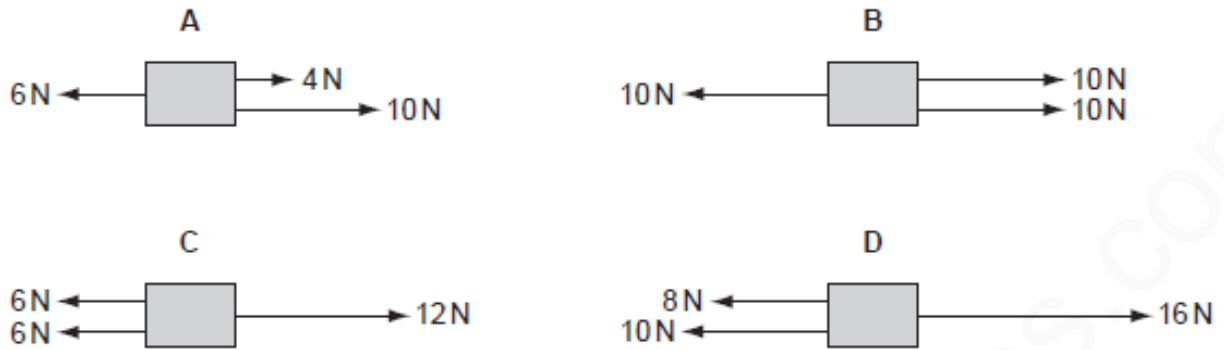
Which effect will be produced by these two forces?

- A** both rotation and movement in a straight line
- B** rotation only
- C** no effect, because the forces are balanced
- D** movement in a straight line only

6

Three forces act in the directions shown on each of the four blocks.

Which block is in equilibrium?



7

Which property of an object **cannot** be affected by applying a force?

- A direction of movement
- B mass
- C shape
- D speed

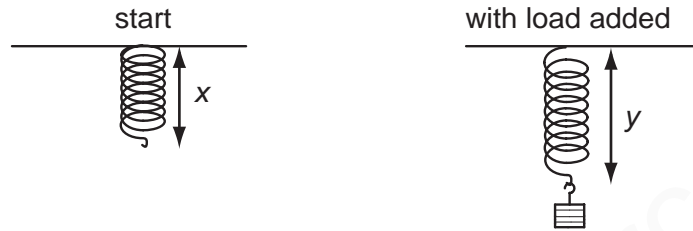
8

In which of these situations is no resultant force needed?

- A a car changing direction
- B a car moving at a steady speed
- C a car slowing down
- D a car speeding up

9

A student carries out an experiment to plot an extension / load graph for a spring. The diagrams show the apparatus at the start of the experiment and with a load added.

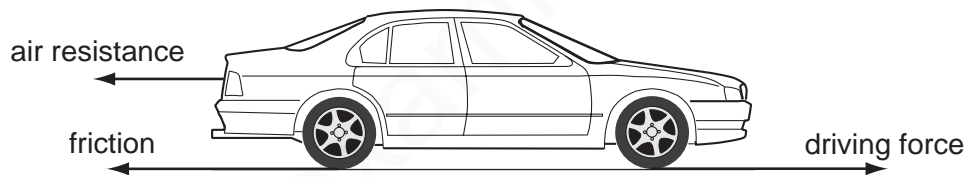


What is the extension caused by the load?

- A x
- B y
- C $y + x$
- D $y - x$

10

Three horizontal forces act on a car that is moving along a straight, level road.



Which combination of forces would result in the car moving at constant speed?

	air resistance	friction	driving force
A	200 N	1000 N	800 N
B	800 N	1000 N	200 N
C	800 N	200 N	1000 N
D	1000 N	200 N	800 N

11

A newton is a unit of force.

Which quantity is measured in newtons?

- A acceleration
- B density
- C mass
- D weight