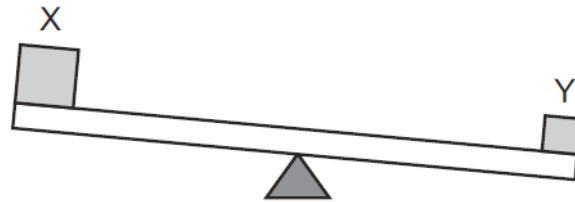


MASS-WEIGHT-SET-2

1

Two objects X and Y are placed on a balance.

The balance tilts as shown.

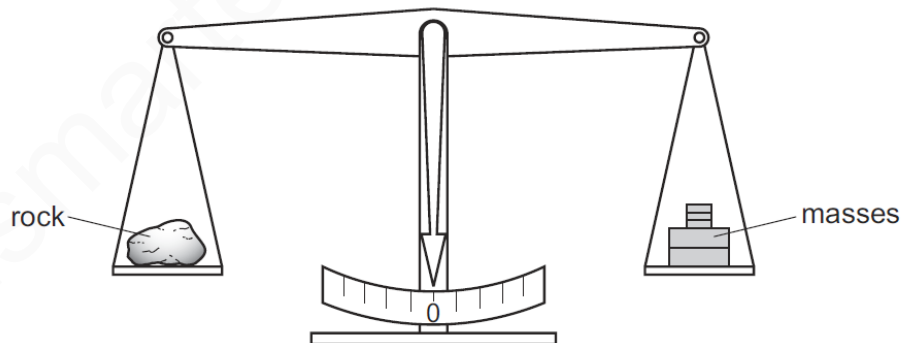


What does this show about the masses and weights of objects X and Y?

	masses	weights
A	X has less mass than Y	X has less weight than Y
B	X has less mass than Y	X has more weight than Y
C	X has the same mass as Y	X has less weight than Y
D	X has the same mass as Y	X has more weight than Y

2

A geologist places a small rock on the left-hand pan of a balance. The two pans are level as shown when masses with a total weight of 23N are placed on the right-hand pan. Take the weight of 1.0 kg to be 10 N.

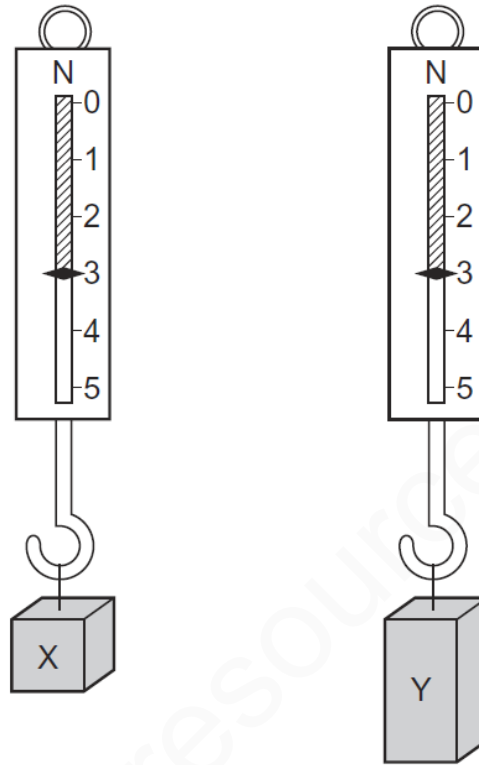


What is the mass of the small rock?

- A** 0.023 kg **B** 2.3 kg **C** 23 kg **D** 230 kg

3

Two blocks of metal X and Y hang from spring balances, as shown in the diagrams.



What does the diagram show about X and Y?

- A** They have the same mass and the same volume but different weights.
- B** They have the same mass and the same weight but different volumes.
- C** They have the same mass, the same volume and the same weight.
- D** They have the same weight and the same volume but different masses.

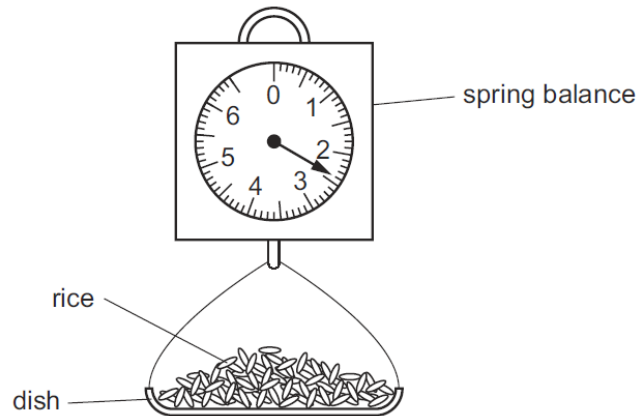
4

Which instrument is used to compare the masses of objects?

- A** a balance
- B** a barometer
- C** a manometer
- D** a measuring cylinder

5

A customer goes to a market and buys some rice. The stallholder pours rice into a dish that hangs from a spring balance. He records the reading on the spring balance.



The customer then buys some pasta and the stallholder notices that the reading on the spring balance, with just pasta in the dish, is the same as it was with just rice in the dish.

The rice and the pasta must have the same

- A density.
- B temperature.
- C volume.
- D weight.

6

A cup contains hot liquid.

Some of the liquid evaporates.

What happens to the mass and what happens to the weight of the liquid in the cup?

	mass	weight
A	decreases	decreases
B	decreases	stays the same
C	stays the same	decreases
D	stays the same	stays the same

7

A piece of steel is taken from the Earth to the Moon for an experiment. The gravitational field strength on the Moon is smaller than on the Earth.

Which statement about the piece of steel is correct?

- A** It has less mass on the Moon than on the Earth.
- B** It has more mass on the Moon than on the Earth.
- C** It weighs less on the Moon than on the Earth.
- D** It weighs more on the Moon than on the Earth.

8

What are the units for mass, pressure and velocity?

	mass	pressure	velocity
A	kg	Ns	Pa
B	kg	Pa	m/s
C	Ns	Pa	m/s
D	Pa	Ns	m/s

9

An object always has mass but does not always have weight.

What must be present and acting on the mass for it to have weight?

- A** a gravitational field
- B** a set of scales
- C** displaced water
- D** friction due to air resistance

10

Which statement about the mass and the weight of an object is correct?

- A** They are both affected by changes in the acceleration of free fall.
- B** They are both forces.
- C** They have different units.
- D** Weight is calculated by dividing mass by the acceleration of free fall.

11

A person steps onto a bathroom scales.

The bathroom scales records both mass and weight.

Which row shows the readings on the scales?

	mass	weight
A	60 N	600 kg
B	60 kg	600 N
C	600 kg	60 N
D	600 N	60 kg