



IGCSE-Physics

Worksheet-3 (Forces and object motion)-P2

Instructions for Multiple choice:

- Choose the one you consider correct.
- Any rough working should be done in this booklet.
- Electronic calculators may be used

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Q1)

Which statement correctly describes the effects of placing a heavy load in a car?

- A** It is easier to accelerate the car and easier to bring the car to rest.
- B** It is easier to accelerate the car but more difficult to bring the car to rest.
- C** It is more difficult to accelerate the car and more difficult to bring the car to rest.
- D** It is more difficult to accelerate the car but easier to bring the car to rest.

Q2)

A mass of 6.0 kg rests on the surface of a planet.

On this planet, $g = 20 \text{ N/kg}$.

What is the weight of the object?

- A** 0.30 N
- B** 0.60 N
- C** 60 N
- D** 120 N

Q3)

The mass of a measuring cylinder is 190 g.

400 cm³ of liquid is put into the measuring cylinder.

The total mass of the measuring cylinder and the liquid is 560 g.

Four solid objects are lowered in turn into the liquid. The densities of the objects are shown.

- 1 0.40 g/cm³
- 2 0.90 g/cm³
- 3 1.2 g/cm³
- 4 2.7 g/cm³

Which objects will float in the liquid?

- A** 1 only
- B** 1 and 2 only
- C** 1, 2 and 3
- D** 3 and 4 only

Q4) 0625/21 May/June 2020 (A)

Which quantity is a vector?

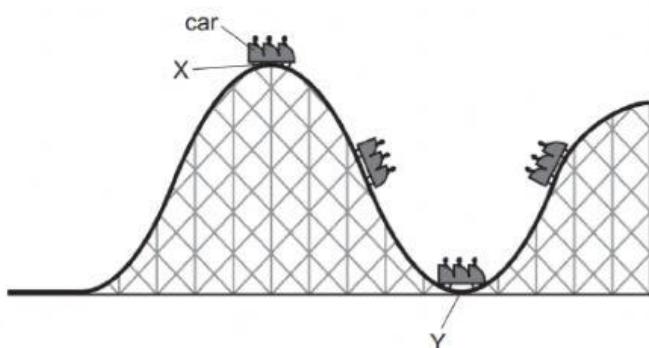
- A** acceleration
- B** distance
- C** speed
- D** mass

Q5)

An object of mass 1.2 kg is moving with a velocity of 2.0 m/s when it is acted on by a force of 4.0 N. The velocity of the object increases to 5.0 m/s.

For what period of time does the force act on the object?

A 0.90 s **B** 1.1 s **C** 1.5 s **D** 3.6 s

Q6)

What happens to the kinetic energy and to the gravitational potential energy of the car as it moves from position X to position Y?

	kinetic energy	gravitational potential energy
A	decreases	decreases
B	decreases	increases
C	increases	decreases
D	increases	increases

Q7)

A space probe is taken from the Earth to Mars.

The force of gravity on the surface of Mars is less than the force of gravity on the surface of the Earth.

How do the weight and the mass of a space probe on the surface of Mars compare to their values when the probe is on the surface of the Earth?

	weight on Mars	mass on Mars
A	decreased	decreased
B	decreased	unchanged
C	unchanged	decreased
D	unchanged	unchanged

Q8)

Water has a density of 1000 kg/m^3 .

A rectangular swimming pool has an average depth of 1.6 m.

The length of the pool is 25 m.

The width of the pool is 10 m.

What is the mass of the water in the swimming pool?

A 2.5 kg **B** 400 kg **C** 400 000 kg **D** 800 000 kg

Q9)

An object is moving at $+3.0\text{ m/s}$.

A force acts on the object.

After a time, the object is moving at -4.0 m/s .

The mass of the object is 5.0 kg .

What is the change in momentum of the body?

A -35 kg m/s **B** -5.0 kg m/s **C** $+5.0\text{ kg m/s}$ **D** $+35\text{ kg m/s}$

Q10)

Which row gives the correct weight for the mass shown?

The value of g is 10 N/kg .

	mass/kg	weight/N
A	2	20
B	10	1
C	10	10
D	20	2