

Worksheet 2

1 Forces

1.1 The weight of an object ...

- A always acts perpendicular to the surface the object is in contact with.
- B always acts away from the centre of the Earth.
- C is directly proportional to the mass of the object.
- D is equal to 9,8 N on the Earth.

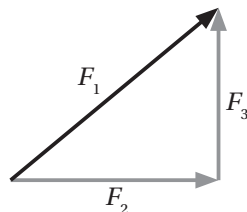
1.2 Frictional force ...

- A always acts perpendicular to the surface an object is in contact with.
- B opposes the motion of an object in contact with a surface.
- C tends to be larger on smooth surfaces than on rough surfaces.
- D always acts in the direction in which an object moves.

1.3 For the same surface ...

- A the maximum static friction is directly proportional to the normal force.
- B the maximum static friction is equal to the coefficient of static friction.
- C the coefficient of static friction is directly proportional to the normal force.
- D kinetic friction is greater than static friction.

1.4 Look at the diagram of forces F_1 , F_2 and F_3 .



Which statement is INCORRECT?

- A F_1 is the resultant of F_2 and F_3 .
- B F_2 and F_3 are components of F_1 .
- C The resultant of F_1 , F_2 and F_3 is zero.
- D The magnitude of F_1 is $\sqrt{(F_2)^2 + (F_3)^2}$.

1.5 For an object on an inclined plane ...

- A the weight of the object acts perpendicular towards the surface of the incline.
- B the weight of the object will keep it at rest on the surface of the incline.
- C the frictional force acts parallel to the weight of the object.
- D the frictional force is smaller than when the same surface is horizontal.

1.6 Three forces are exerted on a point as shown in the diagram. Calculate the net force on the point.

