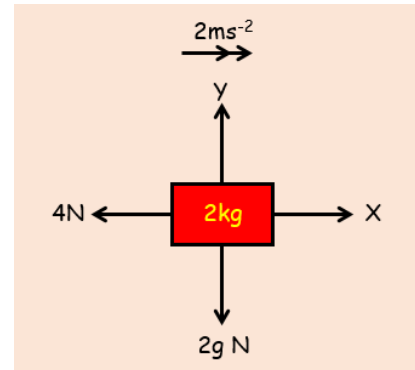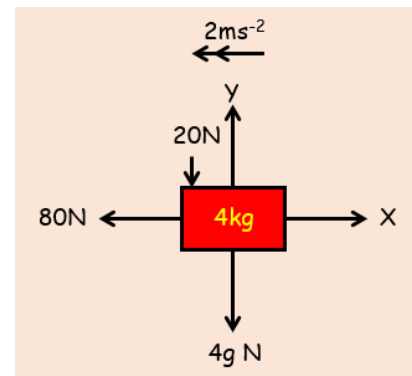# 10C F=ma

1. Find the weight in Newtons, of a particle of mass 12kg.

2. Find the acceleration when a particle of mass 1.5kg is acted on by a force of 6N

3. Find the values of the missing forces acting on the object in the diagram below

a)

$2ms^{-2}$

$4N \leftarrow$ 2kg $\rightarrow X$

$2g$ N

b)

$2ms^{-2}$

20N

$80N \leftarrow$ 4kg $\rightarrow X$

$4g$ N

4. A particle of mass 5kg is pulled along a rough horizontal table by a force of 20N, with a frictional force of 4N acting against it. Given that the particle is initially at rest, find:

a) The acceleration of the particle

b) The distance travelled by the particle in the first 4 seconds

c) The magnitude of the normal reaction between the particle and the table