

Revision Sheet for forces and motion

1. What does **d** and **t** stand for in this formula for speed (symbol **s**)?

$$s = \frac{d}{t}$$

where **d** =

and

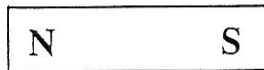
t =

2. If a person goes 100m in 25 seconds what is their speed?

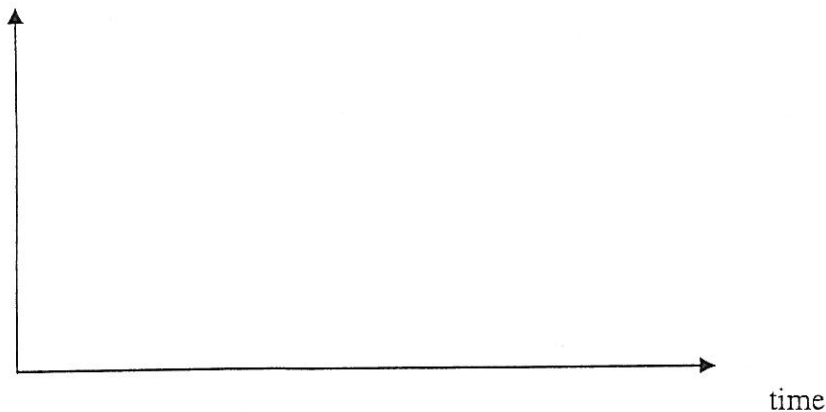
3. How far would a person travel in 2 minutes if they were going 5m/s?

hint: change 2 minutes to seconds by multiplying by 60 and then use the formula $d = s \times t$

4. Draw the magnetic field lines on the single magnet below: **remember that the field lines must never cross or touch and the arrow heads on the field lines point from N to S**

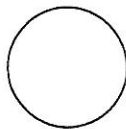


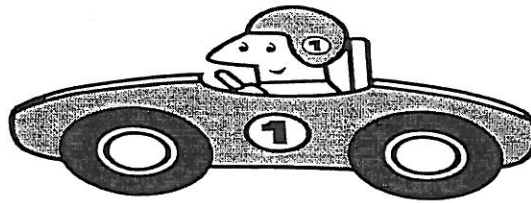
5. Draw a distance time graph showing a person running 8 metres away from a starting point in 10 seconds, stopping for 10 seconds and walking slowly back 8 metres to the starting point in 30 seconds. (hint : the y vertical axis will be from 0 to 10 metres (0, 2, 4, 6, 8, and 10) and the x horizontal axis will be from 0 to 50 seconds (0, 10, 20, 30, 40 and 50))



6. What force always opposes the motion of an object.

7. A ball is falling, draw and label the direction of the gravitational force on the ball and the drag force acting on the ball.





8. On this car travelling to the left draw an arrow of thrust force, the drag force, the gravitational weight force and the support force
9. List one way to increase the the uplift on a glider wing .
10. List 3 ways to decrease friction
 - a)
 - b)
 - c)
9. What does **m** and **a** stand for in this formula for force (symbol **F**)? $F = m \times a$
 where **m** = _____ and **a** = _____
11. What units is force measured in?
 What instrument do we use to measure a force?
 What instrument do we use to measure mass?
12. What is the force acting on a person whose mass is 45kg and the acceleration due to gravity is 10 m/s^2 ? ($F = m \times a$)
13. If a 10N force is applied to a mass of 50 Kg what is the acceleration of the object?

$$a = \frac{F}{m}$$
14. Show the field lines on these magnets:

N S

S N
15. List three types of non-contact forces.
16. Opposite poles always attract or repel (cross out one)
17. Like poles always attract or repel (cross out one)