Sadiq Public School

Do the right, fear no man

Subject: Physics   **Class: C1**   **Day: Saturday (16-11-24)**

Lesson

Speed, velocity and acceleration

A: Inquiry

- ❖ Recall the definition of speed, velocity and acceleration
- ➢ Recall and use the equation
- ➢ V=S/t, v= d/t, a= v-u/t

B: Information

Speed

The rate at which an object covers distance along a path. Speed is a scalar quantity, meaning it's quantified by magnitude only

Formula of speed is

v=S/t

It SI unit is m/s

Velocity

The rate at which an object changes displacement, or changes distance in a particular direction over time. Velocity is a vector quantity, meaning it's quantified by magnitude and direction
Formula of speed is

v=d/t

It SI unit is m/s

Acceleration

The rate at which an object's velocity changes. Acceleration is also a vector quantity
Formula of speed is

a=v-u/t

It SI unit is m/s^2

C: Synthesising

In your notebooks,:

- What is the speed?
- Write definition of velocity and acceleration.

D: Practising

Write the solution of these questions.

- Practice exercise question of chapter on notebook

E: Assessing for learning

1.
Fig. 1.1 shows a cricket ball as it comes into contact with a cricket bat.

The cricket ball has a mass of 0.16 kg and it hits the bat with a speed of 25 m / s. After being in contact with the bat for 0.0013 s, the ball rebounds with a speed of 22 m/ s in the direction exactly opposite to its original direction.

(a) State the difference between *speed* and *velocity*.

....
.... [1]

(b) Calculate

(i) the change in velocity of the cricket ball,

velocity change = ... [1]

(ii) the average acceleration of the ball whilst it is in contact with the bat,

acceleration = ... [2]

(iii) the average force exerted on the ball by the bat.

force = ... [2]

2. A student walks at a constant speed. He takes 100 s to walk 160 paces. The length of each pace is 0.80 m. How far does the student walk in 50 s?

3. A student measures the speed of a trolley. At one instant, the speed of the trolley is 1.0 m / s and two seconds later the speed is 4.0 m / s.
What is the acceleration of the trolley?

Write your answers into an email message and send it to your teacher.

Feedback:

❖ There is no need to send the photos of daily homework. You have to send the solution of assessment ONLY via email.

❖ If you have any queries about this topic, kindly send an email to your subject teachers and he/she will reply you ASAP.

Class	Teachers' Names	Teachers' Abbreviations	Teachers' Email Addresses	Instructions
C1C	Muhammad Saleem Nawaz	MSN	Saleemnawaz_msn_sadiq@protonmail.com	C1Cstudents will send their home assignments to their subject teacher (MAC) for checking and getting feedback.
C1D	Muhammad Ali Rao	RAA	raoaliayub_RAA_sadiq@protonmail.com	C1Dstudents will send their home assignments to their subject teacher (MMI) for checking and getting feedback.
C1E	Muhammad Nadeem	MN	Nadeem_MN_Sadiq@protonmail.com	C1E students will send their home assignments to their subject teacher (AMG) for checking and getting feedback.
C1GA	Humaira Yasmeen	RAA	Yasmeen_HY_Sadiq@protonmail.com	C1GA students will send their home assignments to their subject teacher (HY) for checking and getting feedback.
C1GB	Nighat Zahoor	NZ	zahoor_NZ_Sadiq@protonmail.com	C1GB students will send their home assignments to their subject teacher (AR) for checking and getting feedback.