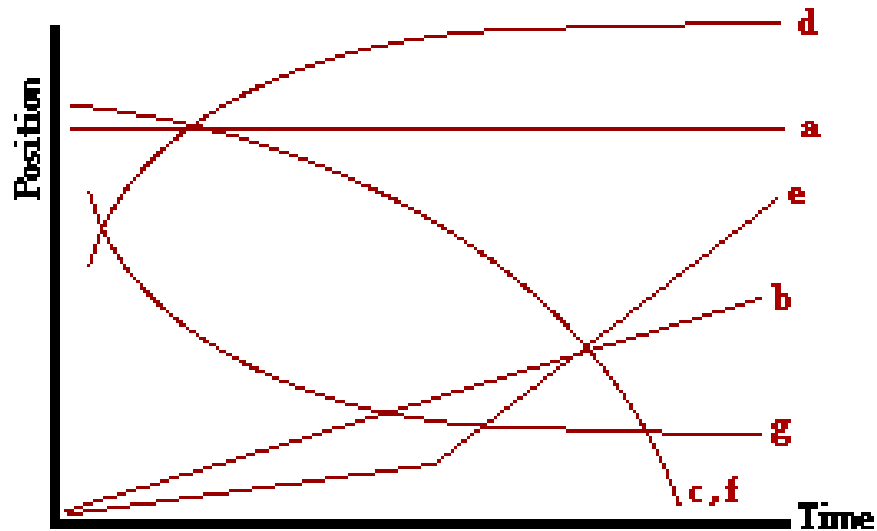


PHYSICS FUNDAMENTALS: 1ST SEMESTER REVIEW

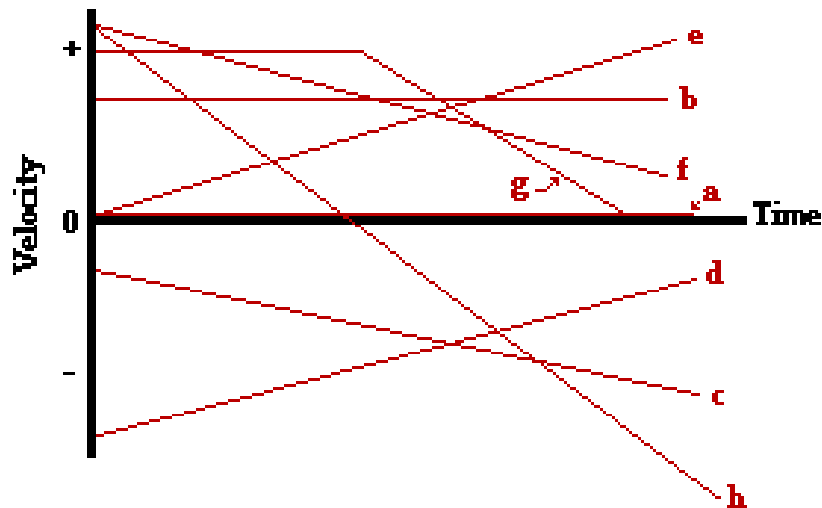
1. On the position-time graph below label each line with the corresponding letter. Lines may be used more than once.

- a) at rest.
- b) moving in the positive direction with constant speed
- c) moving in the negative direction and speeding up
- d) moving in the positive direction and slowing down
- e) moving in the positive direction at a constant speed (slow) and then later fast at constant speed
- f) moving with a negative velocity and a negative acceleration
- g) moving with a negative velocity and a positive acceleration

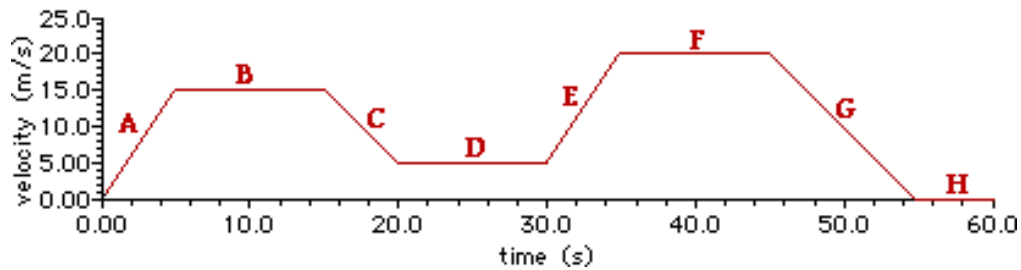
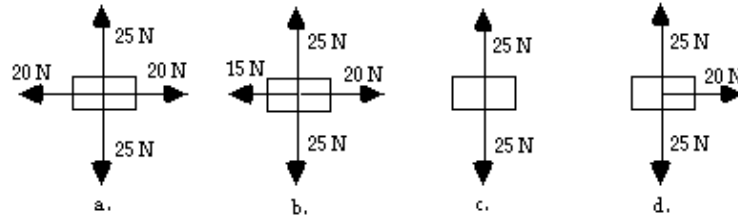


2. On the velocity-time graph below, label each line with the corresponding letter.

- a) at rest
- b) moving in the positive direction at constant speed
- c) moving in the negative direction from slow to fast
- d) moving in the negative direction from fast to slow
- e) moving with a positive velocity and a positive acceleration
- f) moving with a positive velocity and a negative acceleration
- g) moving with a positive velocity at constant speed and then decelerating to a rest position
- h) moving in the positive direction while slowing down, changing directions and moving in the negative directions while speeding up



3. Which one(s) of the following force diagrams depict an object moving to the right with constant speed? Write all possible answers (if any) in the blank: A,C.



4. During which time interval(s), if any, are there no forces acting upon the object? List all that apply. NONE

5. During which time interval(s), if any, are the forces acting upon the object balanced? List all that apply. BDFH

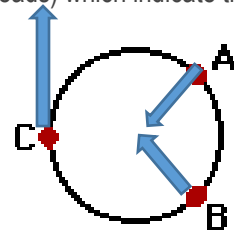
6. During which time interval(s), if any, is there a net force acting upon the object? List all that apply. ACEG

7. During which time interval(s), if any, is the net force acting upon the object directed toward the right? List all. AE

8. During which time interval(s), if any, is the net force acting upon the object directed toward the left? List all that apply. CG

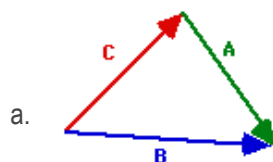
9. In the diagram at the right, draw vector arrows (straight lines with arrowheads) which indicate the following for an object which is moving in a clockwise circle.

- the net force at point A.
- the acceleration at point B.
- the velocity at point C.

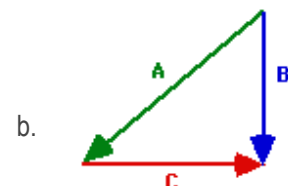


10. Two objects gravitationally attract with a force of 20.0 N. If the **mass** of one of the objects is doubled and the **distance** between their centers is doubled, then the new force of attraction is 10N N.

11. In the following diagrams, two vectors are being added and the resultant is drawn. For each diagram, identify which vector is the resultant.



The resultant is vector B.



The resultant is vector B.

