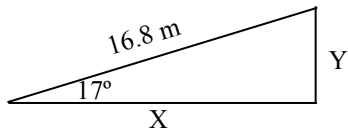
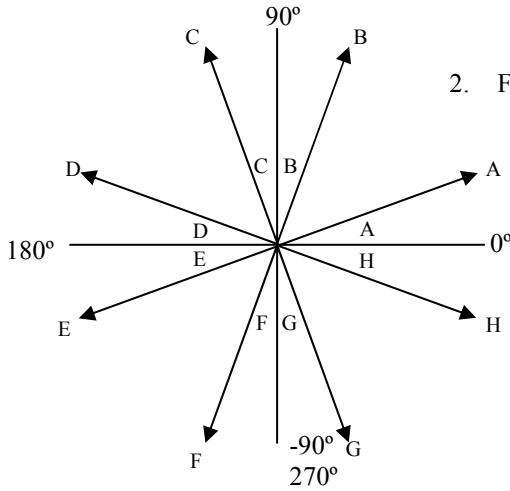


2010-11 PreAP Linear Motion 4



- Use the triangle at the left to answer the following:
 - opposite =
 - Adjacent =
 - Hypotenuse =
 - $\theta =$
 - Following the example at the bottom of the notes, calculate x and y.

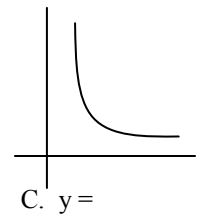
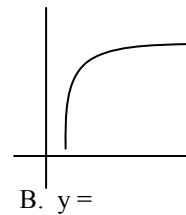
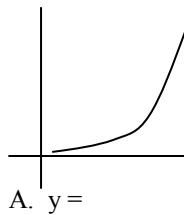


- Find the direction of the other arrows. Each letter's angle is 10° . (*Study Help Available*)

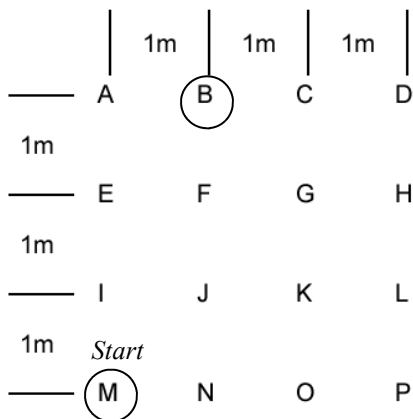
Arrow A =	Arrow E =
Arrow B =	Arrow F =
Arrow D =	Arrow G =

From the "How to Straighten Graphs" notes:

- Give the basic function for each of the following:



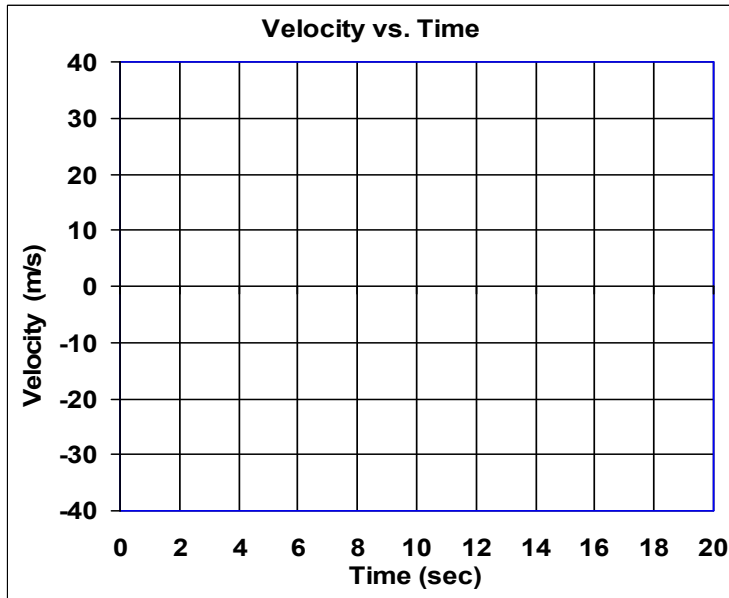
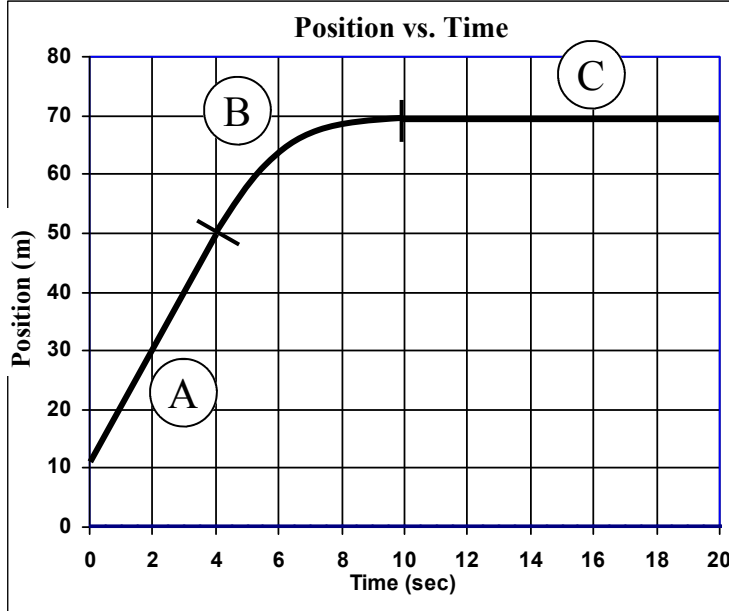
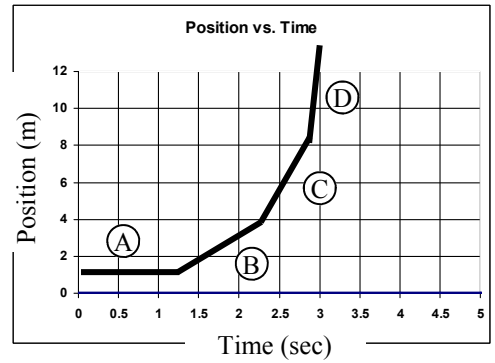
- A car starts at rest and after 20 seconds is driving 42 m/s. How far did the car travel in that time?
 - Write down the variables and number below.
 - Choose an equation: Solve:



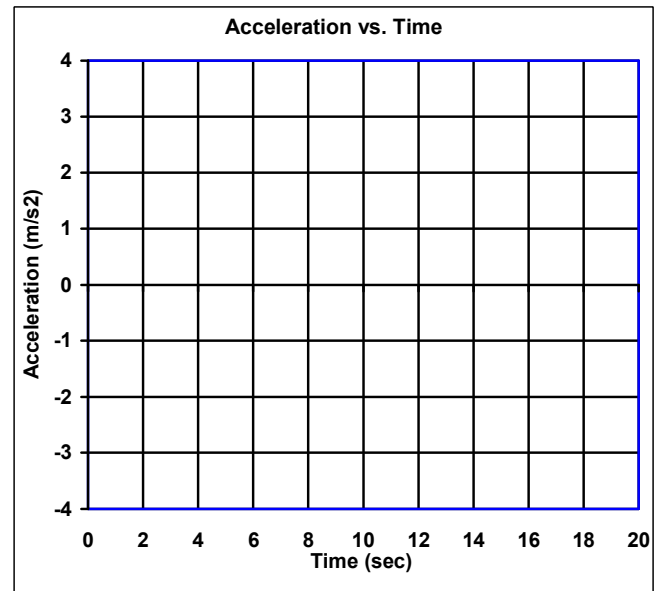
- A track has a perimeter of 120 m. If you walk completely around the track 3 times....
 - What distance did you walk?
 - What is your displacement?
- The object at the left starts at M and moves to B. Find the following displacements:
 - $\Delta x =$
 - $\Delta y =$
- If an object moves from L to N, give the vertical and horizontal displacements.

- An object moving 16 m/s stops in 18 meters. What is the acceleration of the object?
 - Variables below
 - Choose and equation: Solve:

9. Use the position vs time graph at the right to answer the following.
- Which segment has the fastest velocity?
 - Which segment shows the object at rest?
 - Give the letters from slowest to fastest:
 - What is the object doing (use the information from the above answers)?



- OK—let walk you thru the next level.
10. You already know how to do line segments A and C.
- What is the slope from 0 to 4 seconds?
 - Graph this on the velocity graph (0 to 4 seconds only).
 - What is the slope from 10 to 20 seconds?
 - Graph this on the velocity graph (10 to 20 sec only).
 - ON THE VELOCITY GRAPH connect the other two lines with a straight line from 4 to 10 seconds.
 - Transfer the velocity graph to the acceleration graph.



11. Take this data at the right and prepare your graph. Using the "Common Graphing Mistakes" notes set up your axis with numbers and labels. DO NOT GRAPH the data (until I check your setup.)

Time in sec (X)	Force in N (Y)
2	1.1
4	4.6
6	10.3
8	18.4
10	28.7
12	41.3
14	56.3