

4. Mr. Randall walks 12 miles  $40^\circ$  South of East  
(please use a ruler to neatly make your diagram)  
Determine the Eastward and Southern components  
of Mr. Randall's displacement.



South

5. Mr. Grande kicks a soccer ball with an initial velocity of 22.5 m/s at an angle of  $27^\circ$  above the horizontal  
Sketch a neat and labeled component diagram. Determine the horizontal and vertical components of this initial velocity.



vertical

horizontal

6. Mr. Jutton pulls a bag of golf clubs with a force of 230. N at an angle of  $40.0^\circ$  above the horizontal.  
After drawing another neat and labeled vector component diagram, determine the horizontal and vertical components of this force.



vertical

Horizontal

7. If we add two vectors with magnitudes 5 and 12, what is the magnitude of the resultant if the angle between the vectors is.....

a.  $0^\circ$  \_\_\_\_\_ sketch a vector diagram of this.....

b.  $180^\circ$  \_\_\_\_\_ sketch this.....

c.  $90^\circ$  \_\_\_\_\_ sketch this .....

8. A boat with a water speed of 1.0 m/s points directly across a river with a water current of 0.75 m/s south. It is starting on the west bank and pointed eastward.

a) Draw a labelled vector diagram and find the resultant boat velocity with respect to the shore. Also find how many degrees south of east the boats resultant velocity is

b) If the river is 200.0 meters wide, how long will it take the boat to cross the river?

c) How far down stream will the boat end up?

9. Mr. Britton leaves Physics Camp and walks 10.0 km west, then 5.0 km south, then walks 2.0 km east, then 3.0 km south, then 4.0 km East and finally 5.0 km North.

a. Draw a “roughly” scaled vector diagram that depicts this 6 legged journey

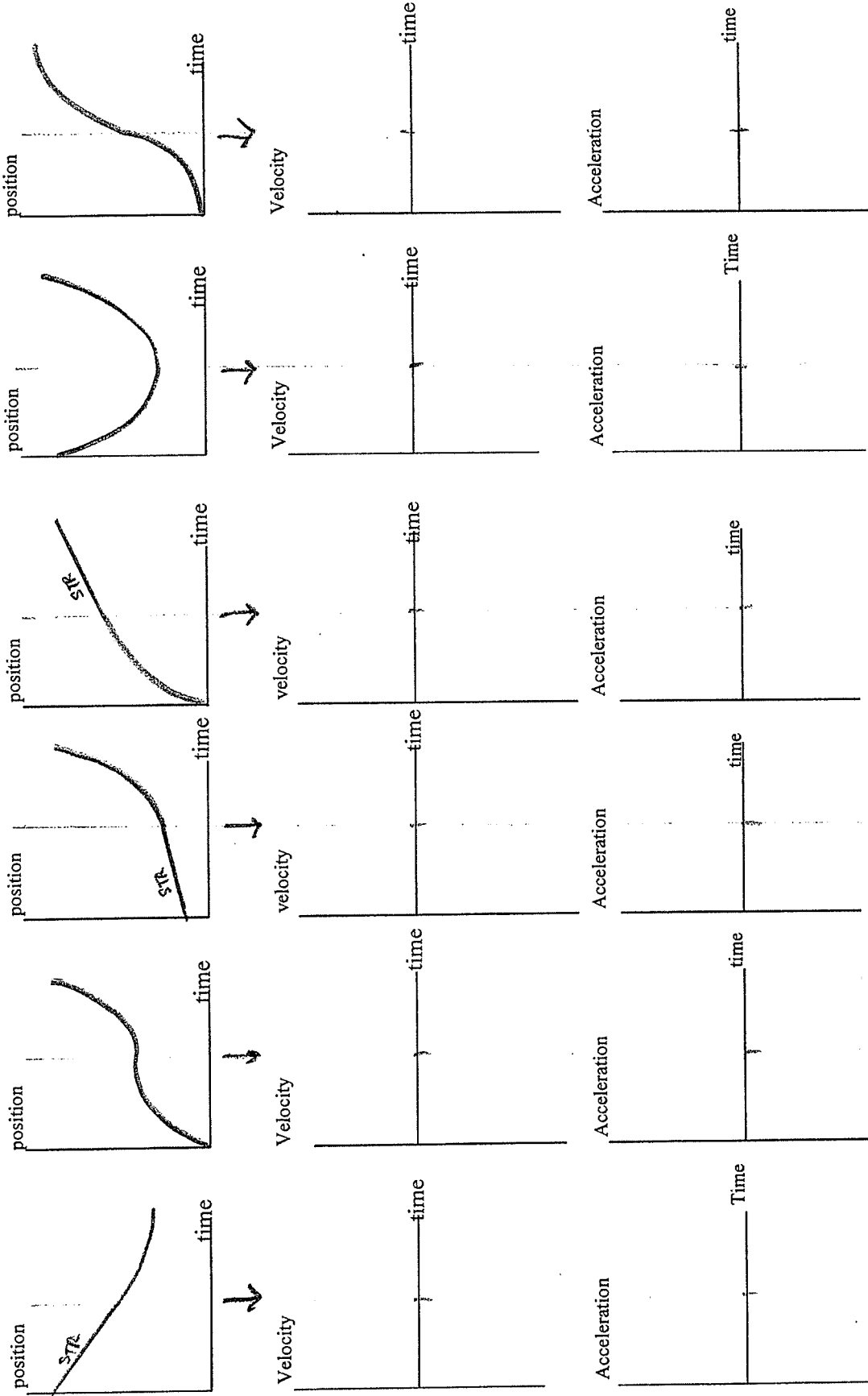
b. Draw his resultant displacement vector.

c. State the magnitude and direction of this resultant vector

QUIZ  
TOMORROW!

GRAPH-A - PALDOZA

Name \_\_\_\_\_



GRAPH-A-R-OO

Name \_\_\_\_\_

