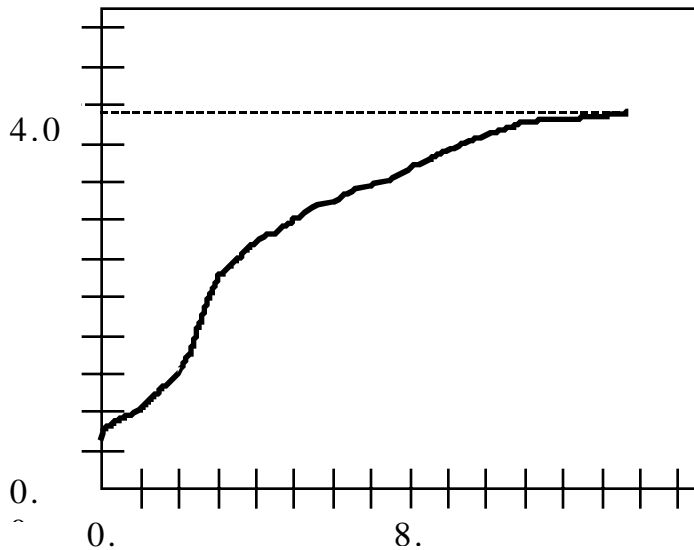


PHYSICS  
MOTION GRAPHS FOR "2-SPEED SHIFTER"

NAME \_\_\_\_\_  
DATE \_\_\_\_\_ PERIOD \_\_\_\_\_

**d(m) vs t(s)**



1. Divide the v-t graph into the following four geometric figures, successively: (a) rectangle; (b) triangle; (c) trapezoid; (d) triangle.

2. Determine the area of each figure (in meters) to determine the displacement it represents. Show each calculation below; **express answers to 0.1 m.**

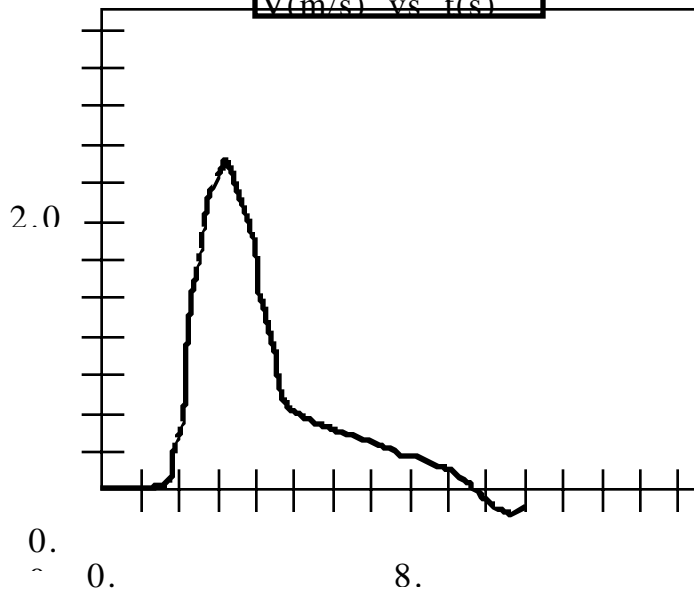
(a)

(b)

(c)

(d)

**V(m/s) vs t(s)**



3. Add the four displacements together to determine the total displacement represented by the area under the v-t graph.

(a) \_\_\_\_\_ m (**express to 0.1 m**)

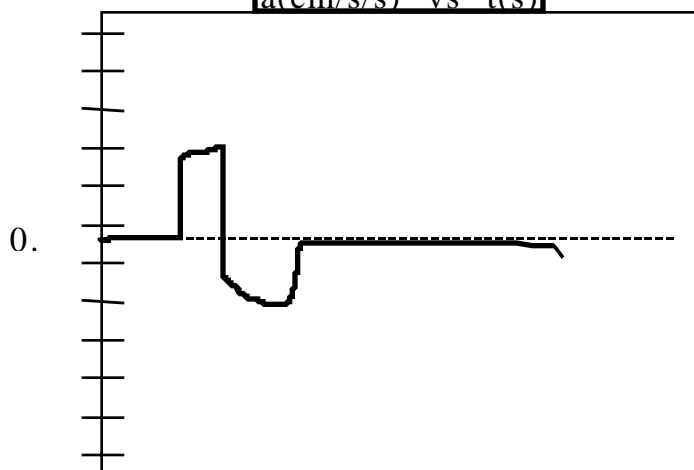
+ (b) \_\_\_\_\_ m "

+ (c) \_\_\_\_\_ m "

+ (d) \_\_\_\_\_ m "

= \_\_\_\_\_ m total from v-t area  
**(express to 0.1 m)**

**a(cm/s/s) vs t(s)**



4. Determine the final displacement on the the d-t graph.

\_\_\_\_\_ m final value direct from d-t graph  
**(express to 0.1 m)**

5. Calculate the % Error. Show sample calculation. (NOTE: If error is greater than 15%, let me check your method.)

0.  
^

8.0