(A) $V_i = 0$
$V_f = 12$
$t = 4$

so $a = 3 \frac{m}{sec^2}$
for the 1st 4 seconds

6

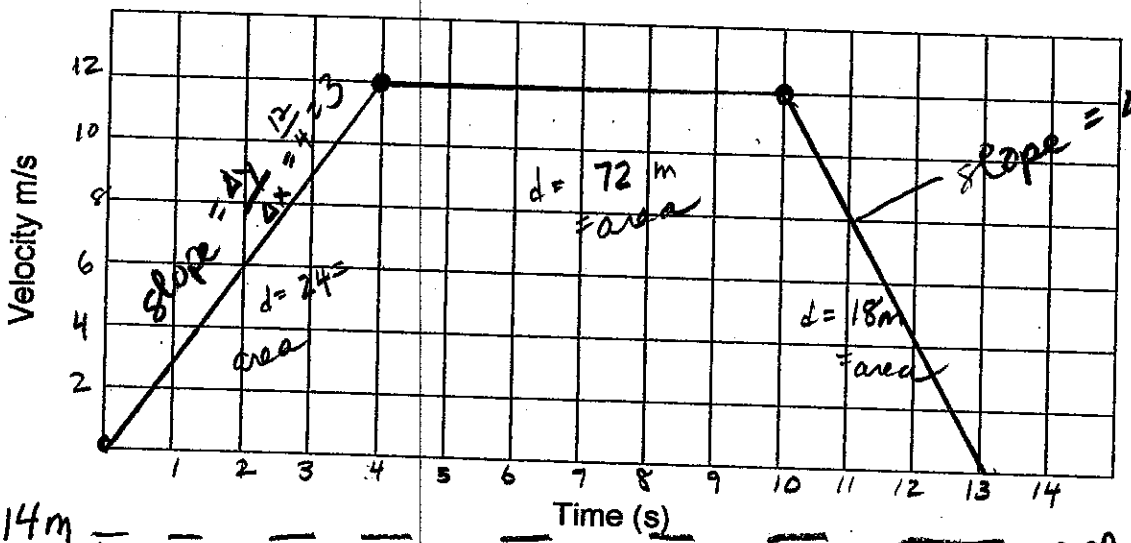
(B) maintains speed of 12 m/sec for 6 secon

2. A car starts from rest and accelerates to a final speed of 12. m/s in 4.0 seconds. The car travels at a speed for 6.0 seconds. The car then slows to a stop in 3.0 seconds. Sketch the graph of **v vs. t** for this motion. Determine an appropriate scale and label. Use that graph to determine the acceleration and distance values for the three sections of the graph. Use those values to sketch the **d vs. t** and **a vs. t** graphs for the motion. Be sure to number the axes.

(C) $V_i = 12$
$V_f = 0$
$t = 3$ sc

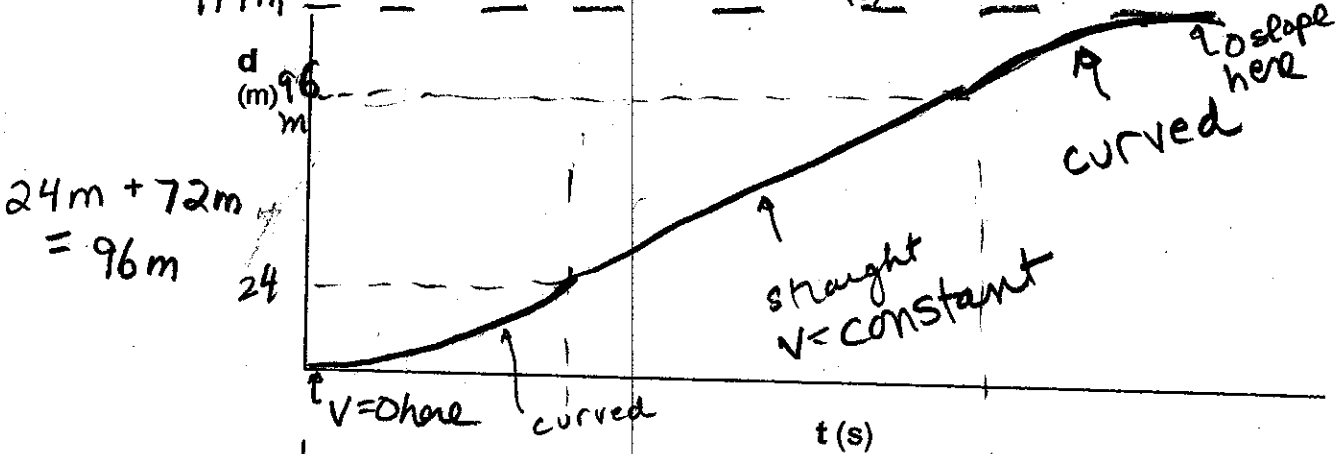
$V_f = V_i + at$
$0 = 12 + a\,3$
$a = -4$

Velocity vs. Time

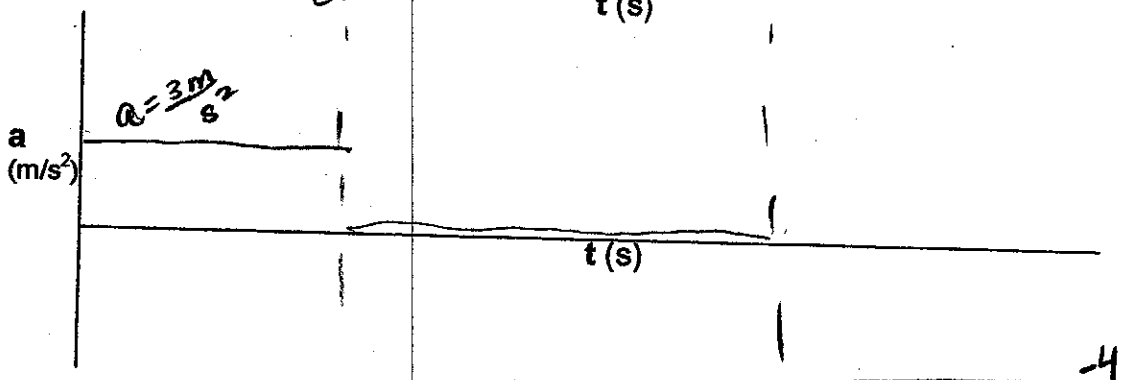


total disp = 114

114m



total disp = 24 + 72 + 18 = 114m



$-4\ m/s^2$