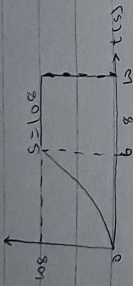
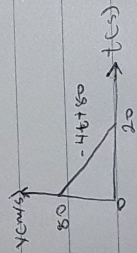
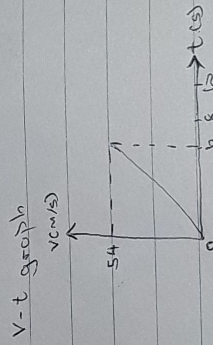


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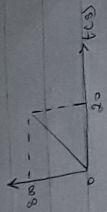
$v = \frac{ds}{dt}$
 $v = 1.5t^2$
 at $t = 6s$
 $v = 1.5 \times 6^2$
 $= 1.5 \times 36$
 $v = 54 \text{ m/s}$

From $t = 6s$ to $t = 10s$, $s = 10m$
 $\therefore v = 0$



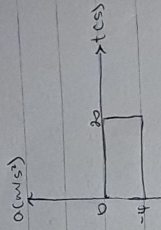
$s = \int v dt$
 $s = \int (-4t + 80)$
 $s = -2t^2 + 80t$
 at $t = 20s$
 $s = -2(20)^2 + 80(20)$
 $s = 1600 - 800 = 800 \text{ m}$

s-t graph

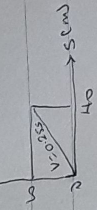


\therefore acceleration
 $a = \frac{dv}{dt}$
 $\therefore a = 4 \text{ m/s}^2$
 at $t = 20s$, $a = 4 \text{ m/s}^2$

a-t graph



s) v-t graph



$a = \left(\frac{dv}{dt}\right) \times v$
 $v = 0.25s$
 $a = 10 \times d(0.25s) / ds$
 $a = 10 \times 0.25$
 $a = 2.5 \text{ m/s}^2$

o-s graph

