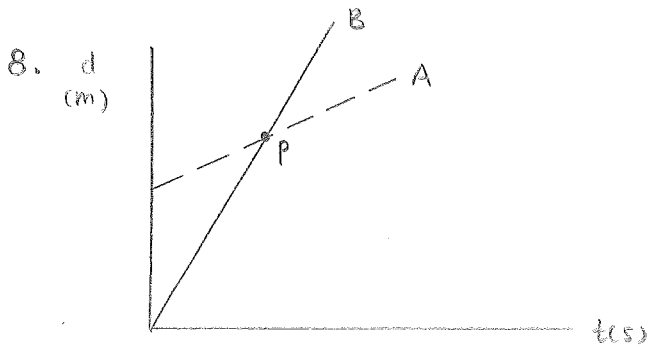
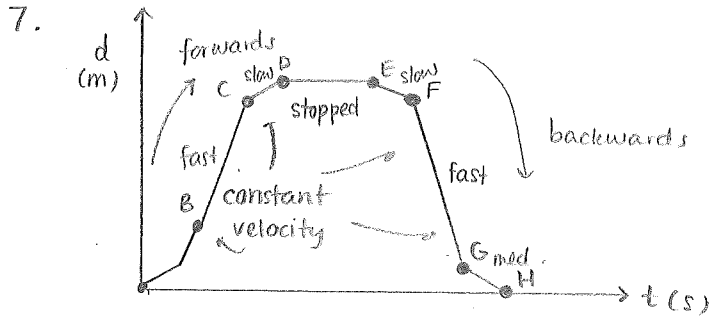
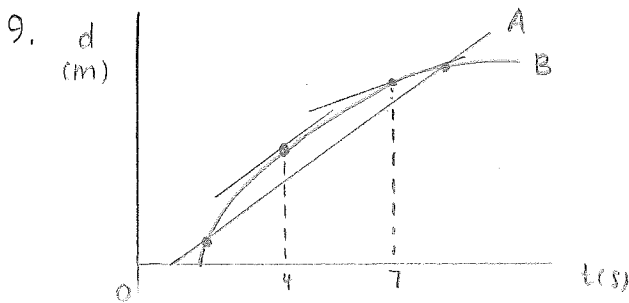


Unit 2 Review

p. 58 # 7-10 (Applying concepts)

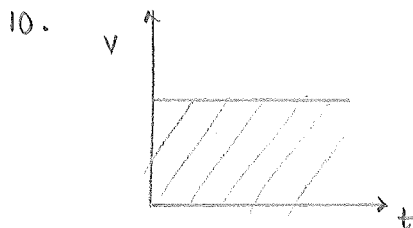


- at $t = 0$, runner A is 4 m ahead of runner B
- runner B is faster (steeper slope)
- runner B passes runner A at point P.



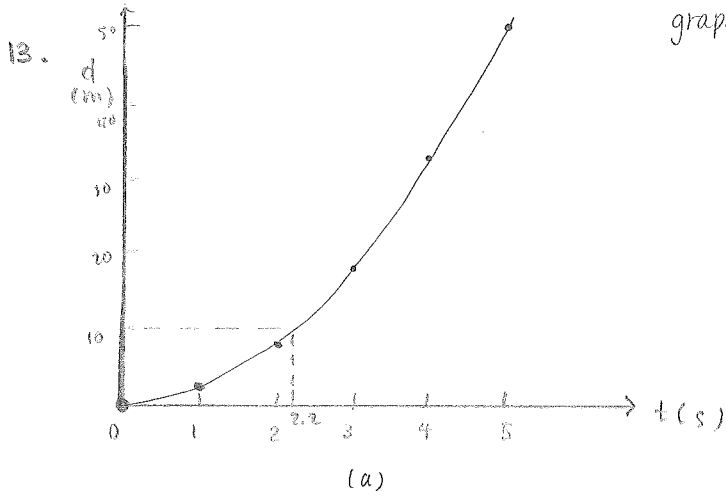
- car B passes A at $t = 1.5$ s
car A " B " $t = 8.5$ s
- at $t = 7.0$ s v_A is moving faster (slope is steeper)
* must draw a tangent line on B at 7s
- The cars have the same velocity at $t = 4$ s (slopes are parallel)

- car B never speeding up
- " " slowing down between 1.4 s - 10 s



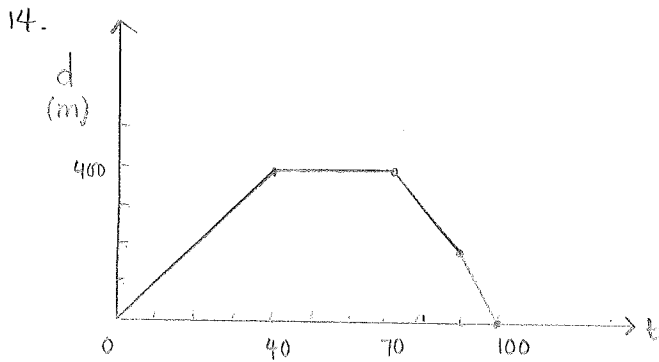
- this graph represents uniform velocity motion
- area under the curve represents displacement.
 $(\text{m/s})(\text{s}) = \text{m}$.

p. 60 # 13, 14, 16, 18, 21 a b, 24, (25) → also draw a \vec{d} vs t graph.



b) exponential curve

c) at $t = 2.2$ s, ball has rolled 10 m

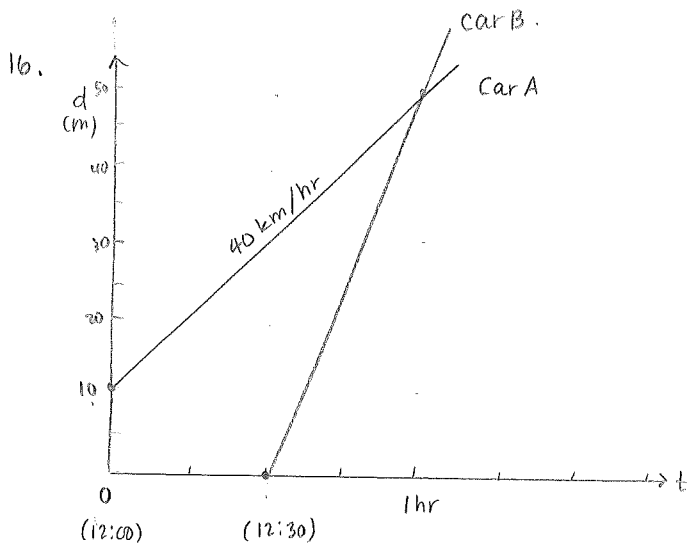


how far object travels :

a) $0 \rightarrow 40$ s 400 m

b) $40 \rightarrow 70$ s 0 m

c) $90 \rightarrow 100$ s 200 m

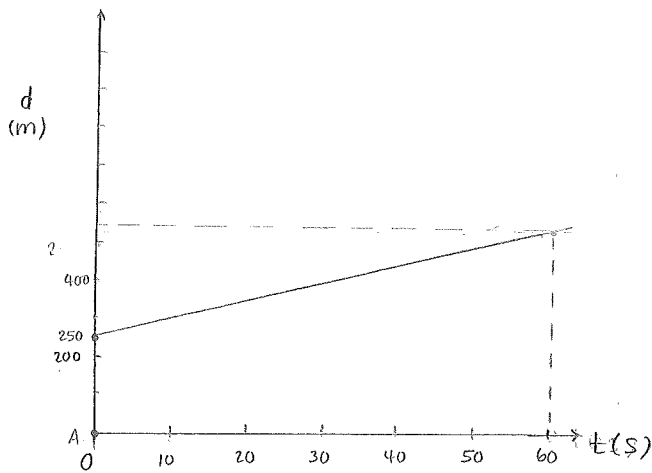


They each get to the beach at 1:00 pm.

$$\text{car A} : 10 + (40)(1) = 50 \text{ km}$$

$$\text{car B} : (50)(0.5) = 50 \text{ km}$$

18.



(a)

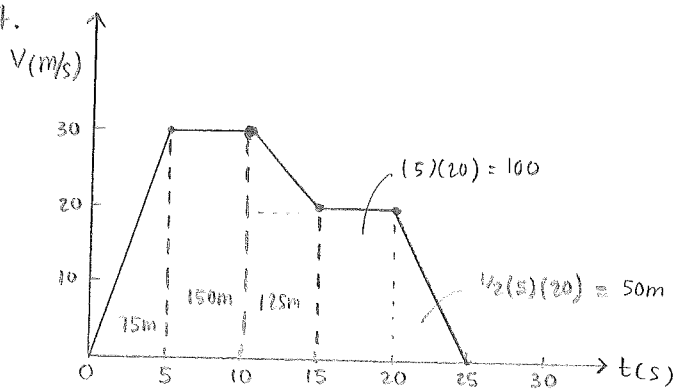
b) at $t = 60.0s$, cyclist is 550 m away from a ?

c) displacement from starting position : $550 - 250 = 300m$

21. a) instantaneous velocity V_B at $t = 2.0s = \frac{8.5 - 0}{5 - 0} = 2.02 \text{ m/s}$

b) " " V_B at $t = 9.0s = \frac{11 - 9}{10 - 7} = 0.67 \text{ m/s}$

24.



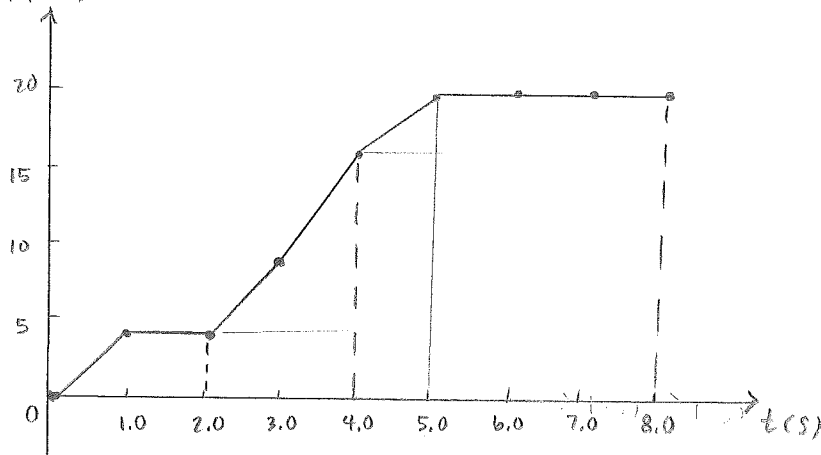
find distance :

a) $t = 0 - 5s$ $d = \frac{1}{2}(5)(30) = 75m$

b) $t = 5s - 10s$ $d = (5)(30) = 150m$

c) $t = 10s - 15s$ $d = (5)(20) + \frac{1}{2}(5)(10) = 125m$

d) $t = 0s - 25s$ $d = 75 + 150 + 125 + 100 + 50$
 $d = 500m$

25. $V(m/s)$ 

(a)

b) $0 \rightarrow 2s$
 $d = \frac{1}{2}(1)(4) + (1)(4) = 6m$

c) $0 \rightarrow 4s$
 $d = 6m + (2)(4) + \frac{1}{2}(2)(12)$
 $d = 26m$

d) $d = 26m + (1)(16) + \frac{1}{2}(1)(4)$
 $+ (3)(20)$

$d = 104m$