

## S10 Unit Review Physics Answers

Pg 376-377

1. a) 10.2 km = 3 SD  
 b) 0.02 m = 1 SD  
 c) 5.0 cm = 2 SD

$$7. a) d = 100 \quad v = \frac{d}{t} = \frac{100m}{10.8s} = 9.26 = 9 \text{ m/s}$$

$$t = 10.8$$

$$v = ?$$

$$b) d = 200 \quad t = \frac{d}{v} = \frac{200m}{9.17 \text{ m/s}} = 21.85 = 20s$$

$$v = 9.17$$

$$t = ?$$

$$8. 2998.7 \text{ km} = d \quad v = \frac{d}{t} = \frac{2998.7 \text{ km}}{41.58 \text{ h}} = 72.12 \text{ km/h}$$

$$41.58 \text{ h} = t$$

$$9. a) 88 \text{ km/h} \rightarrow \text{m/s} \quad \div 3.6 = 24.4 \text{ m/s}$$

$$b) t = 0.25 \quad d = vt$$

$$v = 24.4 \text{ m/s} \quad d = (24.4 \text{ m/s})(0.25 \text{ s})$$

$$d = ? \quad d = 4.88 \text{ m}$$

$$10. a) d = 35 \text{ km} \quad v = \frac{d}{t} = \frac{35 \text{ km}}{169 \text{ min}} = 0.207 \text{ km/min}$$

$$t = 169 \text{ min}$$

$$v = ?$$

$$b) v = 19 \text{ km/h} \quad t = \frac{d}{v} = \frac{35 \text{ km}}{19 \text{ km/h}} = 1.8 \text{ h}$$

$$t = ?$$

$$d = 35 \text{ km}$$

$$11. a) \text{ Bill} \quad v = \frac{y_2 - y_1}{x_2 - x_1}$$

$$v = \frac{40 - 0 \text{ m}}{30 - 0 \text{ s}}$$

$$v = 2 \text{ m/s}$$

$$b) \text{ Mark} \quad v = \frac{y_2 - y_1}{x_2 - x_1} \text{ or } \frac{d_2 - d_1}{t_2 - t_1}$$

$$= \frac{30 - 0}{20 - 10}$$

$$= \frac{30}{10}$$

$$= 3$$

$$v = 4 \text{ m/s}$$

## S10 Unit Review Physics Answers

WS

1. a)  $4.60 + 3 = 7.6 = 8$   
 b)  $0.006 + 0.05 = 0.056 = 0.06$   
 c)  $22.4420 + 56.981 = 79.423$   
 d)  $200 - 87.3 = 113$   
 e)  $67.5 - 0.009 = 67.5$   
 f)  $71.86 - 13.1 = 58.76 = 58.8$   
 g)  $357.89 + 0.002 = 357.89$   
 h)  $17.95 + 32.42 + 50 = 100$   
 i)  $5.5 + 3.7 + 2.97 = 12.2$   
 j)  $84.675 - 3 = 82$   
 k)  $75 - 2.55 = 72$   
 l)  $10 - 9.9 = 0$

2. a)  $13.7 \times 2.5 = 34.25 = 34$   
 b)  $200 \times 3.58 = 716 = 700$   
 c)  $0.00003 \times 727 = 0.02181 = 0.02$   
 d)  $\frac{5003}{3.781} = 1323$   
 e)  $\frac{89}{9.0} = 9.9$   
 f)  $\frac{5000}{55} = 90$   
 g)  $7.6 \times 21.9 = 170$   
 h)  $2.15 \times 31 \times 100 = 700$   
 i)  $5.00009 \times 0.06 = 0.3$   
 j)  $\frac{38}{7} = 5$   
 k)  $\frac{500009}{17.000} = 29412$   
 l)  $\frac{500000}{5.002} = 10000$

3. The speedometer of a car reads instant speed. Because it is the speed at that instant you are driving not an average of your overall speed.

4.  $d = 139\text{m}$   
 $v = 13.0\text{m/s}$   
 $t = ?$

$$t = \frac{d}{v} = \frac{139\text{m}}{13.0\text{m/s}} = 10.7\text{s}$$



5.  $v = 45\text{miles/h}$   
 $d = 1,800\text{miles}$

$$t = \frac{d}{v} = \frac{1,800}{45} = 40\text{hrs}$$

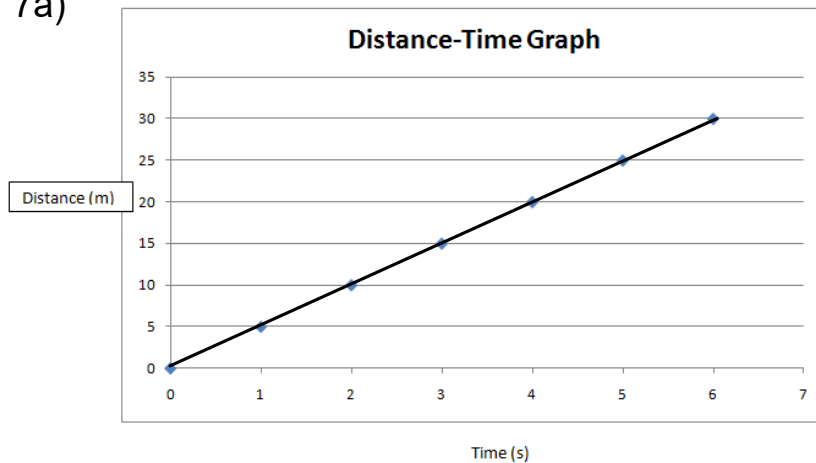
6.  $v = 50,000\text{km/h}$   
 $t = 4\text{hr}$   
 $d = ?$

$$d = vt$$

$$d = (50,000)(4)$$

$$d = 200,000\text{km}$$

7a)



7. b)  $v = \frac{d_2 - d_1}{t_2 - t_1}$  or  $\frac{y_2 - y_1}{x_2 - x_1}$

$$\frac{30 - 0\text{m}}{6 - 0\text{s}} = \frac{30\text{m}}{6\text{s}} = 5\text{m/s}$$

8

Time (h)	Distance (km)
0	0
1	100
2	200
3	300
4	300
5	300

- a. At 2 hours what was the cars distance?  
 The car's distance at 2 hours was 200km
- b. What was the total distance travelled by the car?  
 The total distance travelled by the car was 300km

