

S10 Unit Review Physics Answers

Pg 376-377

1. a) $10.2 \text{ km} = 3 \text{ SD}$

b) $0.02 \text{ m} = 1 \text{ SD}$

c) $5.0 \text{ cm} = 2 \text{ SD}$

7. a) $d = 100$
 $t = 10.8$
 $v = ?$

$$v = \frac{d}{t} = \frac{100 \text{ m}}{10.8 \text{ s}} = 9.26 = 9 \text{ m/s}$$

b) $d = 200$
 $v = 9.17$
 $t = ?$

$$t = \frac{d}{v} = \frac{200 \text{ m}}{9.17 \text{ m/s}} = 21.8 \text{ s} = 20 \text{ s}$$

8. $2998.7 \text{ km} = d$
 $41.58 \text{ h} = t$

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

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

b) $t = 0.2 \text{ s}$

$v = 24.4 \text{ m/s}$

$d = ?$

$d = vt$

$d = (24.4 \text{ m/s})(0.2 \text{ s})$

$d = 4.88 \text{ m}$

10. a) $d = 35 \text{ km}$

$t = 169 \text{ min}$

$v = ?$

$v = \frac{d}{t} = \frac{35 \text{ km}}{169 \text{ min}} = 0.207 \text{ km/min}$

b) $v = 19 \text{ km/h}$

$t = ?$

$d = 35 \text{ km}$

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

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

$v = \frac{60 - 0 \text{ m}}{30 - 0 \text{ s}}$

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

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

$= \frac{80 - 0}{30 - 10}$

$= \frac{80}{20}$

$= 4$

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

S10 Unit Review Physics Answers

WS

- 1. a) $4.60 + 3 = 7.6 = 8$
- b) $0.008 + 0.05 = 0.058 = 0.06$
- 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) $10 - 9.9 = 0.1$

$$2. a) 13.7 \times 2.5 = 34.25 = 34$$

$$b) 200 \times 3.58 = 716 = 700$$

$$c) 0.00003 \times 727 = 0.02181 = 0.02$$

$$d) \frac{5003}{3.781} = 1323$$

$$e) \frac{89}{9.0} = 9.9$$

$$f) \frac{5000}{55} = 90$$

$$g) 7.6 \times 21.9 = 170$$

$$h) 2.15 \times 31 \times 100 = 700$$

$$i) 5.00009 \times 0.06 = 0.3$$

$$j) \frac{38}{7} = 5$$

$$k) \frac{500\,009}{17.000} = 29412$$

$$l) \frac{500\,000}{5.002} = 10000$$

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

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



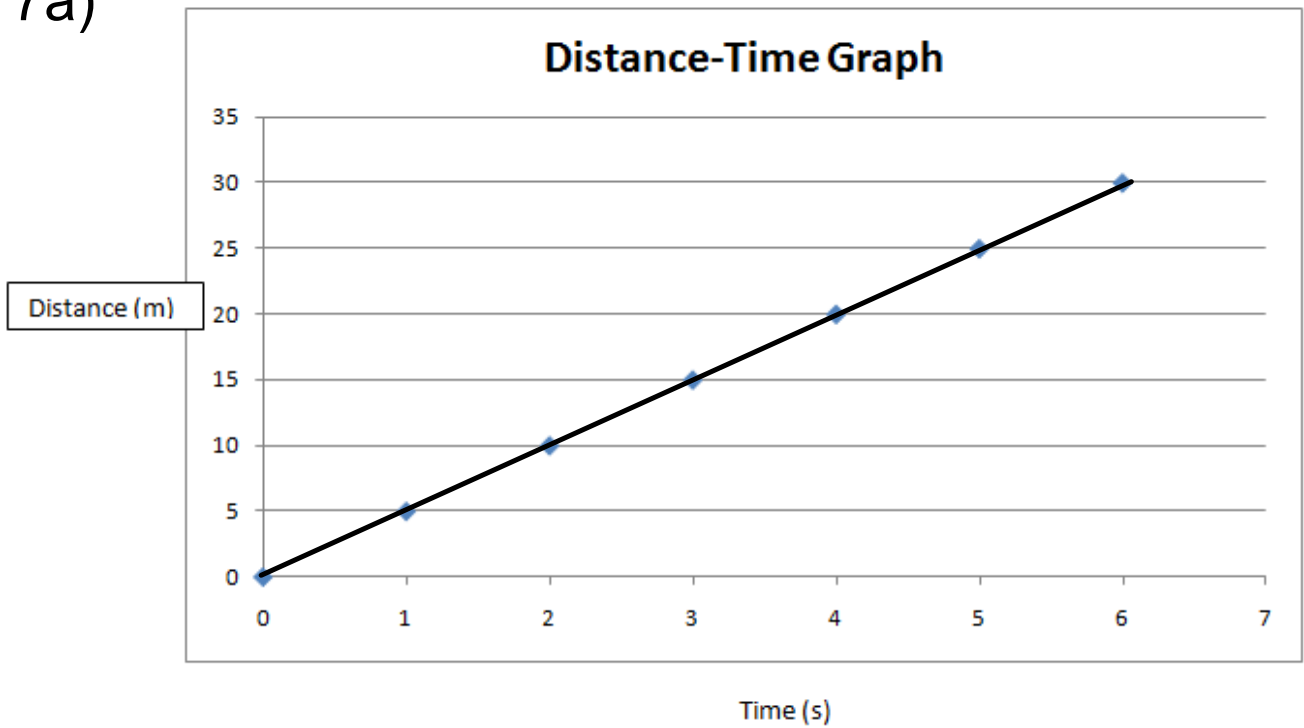
5. $v = 45\text{miles/h}$
 $d = 1,800\text{miles}$

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

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

$$d = vt$$
$$d = (50,000)(4)$$
$$d = 200,000\text{km}$$

7a)



$$7. b) v = \frac{d_2 - d_1}{t_2 - t_1} \quad \text{or} \quad \frac{y_2 - y_1}{x_2 - x_1}$$
$$\frac{30 - 0 \text{ m}}{6 - 0 \text{ s}} = \frac{30 \text{ m}}{6 \text{ s}} = 5 \text{ m/s}$$

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

