

Fully-Worked Solutions

PRACTICE 4

Section A

$$1 \quad 4\frac{1}{6} : 3\frac{1}{3} = \frac{25}{6} : \frac{10}{3}$$

$$= 25 : 20$$

$$= 5 : 4$$

Answer: A

$$2 \quad \text{Farid's mass} = 78 \text{ kg}$$

$$\text{Brother's mass} = 60 \text{ kg}$$

$$\text{Sister's mass} = 42 \text{ kg}$$

$$\text{Farid's mass} : \text{Brother's mass} : \text{Sister's mass}$$

$$= 78 : 60 : 42$$

$$= 13 : 10 : 7$$

Answer: B

$$3 \quad 12 : 21 = 4 : 7$$

$$8 : 14 = 4 : 7$$

Answer: C

$$4 \quad 12 \text{ cm} : 60 \text{ mm} : 0.9 \text{ m} = 12 : 6 : 90$$

$$= 2 : 1 : 15$$

Answer: A

$$5 \quad \text{Bottle A: } \frac{12}{1.5} = 8 \text{ per litre}$$

$$\text{Bottle B: } \frac{8.5}{1} = 8.5 \text{ per litre}$$

$$\text{Bottle C: } \frac{5.8}{0.6} = 9.67 \text{ per litre}$$

Bottle A is more affordable.

Answer: A

$$6 \quad \frac{72\,000}{90} = 800 \text{ cm}^3 \text{ per second}$$

Answer: A

$$7 \quad \frac{7\,050}{100} \times 470 = 33\,135$$

Answer: C

$$8 \quad A : D = 5 : 6 = 20 : 24$$

$$D : F = 8 : 3 = 24 : 9$$

$$A : D : F = 20 : 24 : 9$$

Answer: D

$$9 \quad 7 \text{ units} = 630 \text{ g}$$

$$1 \text{ unit} = 90 \text{ g}$$

$$\text{Mass of water needed} = 4 \times 90 \text{ g}$$

$$= 360 \text{ g}$$

Answer: D

$$10 \quad \frac{x}{320} = \frac{4}{50}$$

$$x = \frac{4}{50} \times 320$$

$$= 25.6$$

Answer: C

$$11 \quad \frac{x}{100} \times 124 = 99.20$$

$$\frac{x}{100} = \frac{99.20}{124}$$

$$x = \frac{99.20}{124} \times 100$$

$$x = 80$$

$$\text{Discount} = 100 - 80$$

$$= 20$$

Answer: A

$$12 \quad 64 : 36 = 16 : 9$$

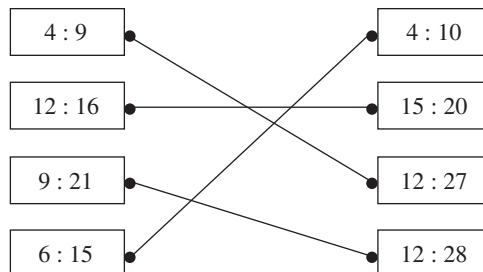
Answer: D

Section B

1

4 : 15 : 8	6 : 12 : 14	9 : 21 : 42	24 : 15 : 32
7 : 21 : 14	16 : 22 : 8	15 : 30 : 25	63 : 42 : 28
16 : 28 : 21	39 : 13 : 52	10 : 30 : 9	12 : 24 : 32

2 (a)



$$3 \quad (a) \quad 0.04 : 0.16 : 0.24 = 1 : \boxed{4} : \boxed{6}$$

$$(b) \quad 1\frac{1}{2} : 1 : 2\frac{1}{4} = \boxed{6} : \boxed{4} : 9$$

$$(c) \quad 18 \text{ cm} : 30 \text{ mm} = \boxed{6} : 1$$

$$(d) \quad \boxed{48} \text{ minutes} : 3 \text{ hours} = 4 : 15$$

$$4 \quad (a) \quad \frac{32}{48} = 40, \quad \frac{80}{2} = 40$$

Proportional

$$(b) \quad \frac{600}{2.4} = 250, \quad \frac{1\,500}{5.4} = 278$$

Not Proportional

$$(c) \quad \frac{3\,100}{400} = 7.75, \quad \frac{11\,750}{1\,500} = 7.83$$

Not Proportional

$$(d) \frac{6\,000}{9} = 666.67, \frac{10\,000}{15} = 666.67$$

Proportional

Section C

- 1 (a) (i) $24 \div 6 : 42 \div 6 : 30 \div 6$
 $= 4 : 7 : 5$
 (ii) $0.2 : 0.6 : 0.08 = 20 \div 4 : 60 \div 4 : 8 \div 4$
 $= 5 : 15 : 2$
 (iii) $\frac{9}{10} \times 10 : \frac{3}{2} \times 10 : \frac{12}{5} \times 10$
 $= 9 \div 3 : 15 \div 3 : 24 \div 3$
 $= 3 : 5 : 8$
 (b) (i) $6 + 2 + 5 = 13$ units
 $= 78$ cm
 $1 \text{ unit} = 6$ cm
 $PR = (6 + 2) \times 6 = 48$ cm
 (ii) $QS = (2 + 5) \times 6 = 42$ cm
 (c) (i) $30 \div 6 : 72 \div 6 : 48 \div 6$
 $= 5 : 12 : 8$
 (ii) $72 : 48 = 3 : 2$
- 2 (a) (i) 2 units = RM1 400
 $1 \text{ unit} = \text{RM}700$
 Levin's income
 $= 5 \times 700$
 $= \text{RM}3\,500$
 (ii) Total income
 $= 12 \times 700$
 $= \text{RM}8\,400$
 (b) 2 units = 16
 $1 \text{ unit} = 8$
 Total number of apples in sacks A and B
 $= (3 + 6) \times 8$
 $= 72$

$$(c) 35\% = 14 \Rightarrow 5\% = 2 \Rightarrow 100\% = 40$$

$$5 \text{ units} = 40$$

$$1 \text{ unit} = 8$$

$$\text{Total number of students}$$

$$= 8 \times 8$$

$$= 64$$

- 3 (a) (i) 7 units = RM2 100
 $1 \text{ unit} = \text{RM}300$
 $\frac{4\,800}{300} = 16$ units
 $x = 16 - 5 - 7 = 4$
 (ii) $4 \times 300 = \text{RM}1\,200$
- (b) (i) $\frac{63 \text{ m}}{1 \text{ s}} = \frac{63 \div 1\,000 \text{ km}}{1 \div 3\,600 \text{ h}}$
 $= 226.8 \text{ km/j}$
 $\frac{63 \text{ m}}{1 \text{ s}} = \frac{63 \div 1\,000 \text{ km}}{1 \div 3\,600 \text{ h}}$
 $= 226.8 \text{ km/h}$
 (ii) $\frac{4.6 \text{ kg}}{1 \text{ l}} = \frac{4.6 \times 1\,000 \text{ g}}{1 \times 1\,000 \text{ cm}^3}$
 $= 4.6 \text{ g/cm}^3$
- (c) (i) $p : q = 3 \times 3 : 8 \times 3 = 9 : 24$
 $q : r = 6 \times 4 : 5 \times 4 = 24 : 20$
 $p : q : r = 9 : 24 : 20$
 (ii) $a : b = 4 \times 3 : 9 \times 3 = 12 : 27$
 $a : c = 3 \times 4 : 4 \times 4 = 12 : 16$
 $a : b : c = 12 : 27 : 16$