

## Section 3 Test 8 (page 35)

- a) 5, 0, 3 ( $4526 \times 9 = 40734$ )

b) 4, 4 ( $5894 \div 7 = 842$ )
- a) 26 hours ( $156 \div 6 = 26$ )

b) 180m/min ( $60\text{m}/20 \text{ sec} \times 3 = 180\text{m}/\text{min}$ )

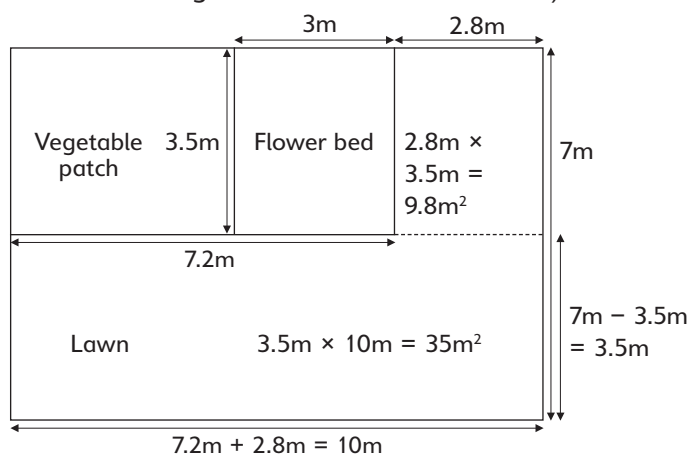
c) 67.5km ( $45\text{km}/\text{hr} = 22.5\text{km}/\frac{1}{2} \text{ hr}$ , so  $45\text{km} + 22.5\text{km} = 67.5\text{km}$ )
- 2210 (136 loaves in 12 min = 680 loaves in 1 hr = 2040 loaves in 3 hr. Also 170 loaves in 15 min, so  $2040 + 170 = 2210$ .)
- a) 60 (The ratio 5:3:6 totals 14.  $168 \div 14 = 12$ , so  $5 \times 12 = 60$ .)

b) 36 ( $3 \times 12 = 36$ )

c) 72 ( $6 \times 12 = 72$ )
- a) 7 (if  $x^2 + 12 = 61$ , then  $x^2 = 49$ ,  $\sqrt{49} = 7$ )

b) 26 ( $26 + 40 = 66$ )

c) 22 ( $3b + c$  is the same as  $3b + 2b$  as  $c$  is the same as  $2b$ . So  $5b = 55$ , so  $b = 11$ , so  $c = 22$ .)
- a) 44.8m<sup>2</sup> (Split the compound shape into 2 rectangles.  $35\text{m}^2 + 9.8\text{m}^2 = 44.8\text{m}^2$ .)



- b) 34m ( $10\text{m} + 7\text{m} + 2.8\text{m} + 3.5\text{m} + 7.2\text{m} + 3.5\text{m}$ )

c)  $\frac{3}{20}$  (The entire area is  $10\text{m} \times 7\text{m} = 70\text{m}^2$ , the flower bed is  $3\text{m} \times 3.5\text{m} = 10.5\text{m}^2$ .  $\frac{10.5}{70} = \frac{21}{140} = \frac{3}{20}$ .)

d) 4 (The veg patch is  $4.2\text{m} \times 3.5\text{m} = 14.7\text{m}^2$ . Each bag covers  $4\text{m}^2$  so she would need 4 bags to cover the entire patch.)
- £605 500 (if  $\frac{2}{7} = £173\,000$ , then  $\frac{1}{7} = £86\,500$ , so  $\frac{7}{7} = £605\,500$ )

- a) 9 ( $8 + 12 + 5 + 9 + 13 + 7 = 54 \div 6 = 9$ )

b) 8.5 (The median is the middle value when the numbers are put in order: 5, 7, 8, 9, 12, 13. The middle number would be halfway between 8 and 9 so 8.5.)

c) 16 (If the mean after 7 matches was 10, then the total number of goals after 7 matches was 70. She had scored 54 after 6 matches so must have scored 16 in the 7th match.)

## Section 3 Test 9 (page 36)

- a) 5 (bars under the horizontal line)

b) November ( $-\text{£}50$ )

c) £45 ( $\text{£}90 - \text{£}45$ )

d) February and March ( $\text{£}65$  to  $-\text{£}45 = \text{£}110$ )

e) July and August ( $-\text{£}40$  to  $\text{£}80 = \text{£}120$ )
- a) 34 (The ratio is 2:3:4 which totals 9, so  $153 \div 9 = 17$ .  $17 \times 2 = 34$ .)

b) 51 ( $17 \times 3 = 51$ )

c) 68 ( $17 \times 4 = 68$ )
- 70p (if  $3\frac{1}{4}l = \text{£}4.55$ , then divide by 13 =  $\frac{1}{4}l = 35\text{p}$ , so  $\frac{1}{2}l = 70\text{p}$ )
- 77 ( $234 \div 3 = 78$ , so 78 is the middle number so 77 must be the smallest number)
- $4\frac{1}{8}$  ( $5\frac{1}{2} - 2\frac{3}{4} = 2\frac{3}{4}$ ,  $2\frac{3}{4} \div 2 = 1\frac{3}{8}$ ,  $2\frac{3}{4} + 1\frac{3}{8} = 4\frac{1}{8}$ )
- a) £1.35 (10% of  $\text{£}1.20 = 12\text{p}$ , 5% =  $6\text{p}$ , 2.5% =  $3\text{p}$  so 12.5% =  $12\text{p} + 3\text{p} = 15\text{p}$ .  $\text{£}1.20 + 15\text{p} = \text{£}1.35$ .)

b) 42p (10% of  $30\text{p} = 3\text{p}$ , so 40% =  $12\text{p}$ .  $30\text{p} + 12\text{p} = 42\text{p}$ .)

c) 62p (10% of  $50\text{p} = 5\text{p}$ , 1% =  $0.5\text{p}$ , so 20% =  $10\text{p}$  and 4% =  $2\text{p}$  so  $10\text{p} + 2\text{p} = 12\text{p}$ .  $50\text{p} + 12\text{p} = 62\text{p}$ .)

d) £1.16 (10% of  $80\text{p} = 8\text{p}$ , so 40% =  $32\text{p}$ , 5% =  $4\text{p}$ , so  $32\text{p} + 4\text{p} = 36\text{p}$ .  $80\text{p} + 36\text{p} = \text{£}1.16$ .)

e) £3.40 (10% of  $\text{£}2.50 = 25\text{p}$ , so 30% =  $75\text{p}$ . 1% =  $2.5\text{p}$  so 6% =  $15\text{p}$ .  $75\text{p} + 15\text{p} = 90\text{p}$  so  $\text{£}2.50 + 90\text{p} = \text{£}3.40$ .)
- a) 15:50 (her watch has moved on 8 min, so should have moved forward 16 min)

b) 18:18 (her watch has moved on 1 hr 22 min, so should have moved forward 2 hr 44 min)

c) 15:41 (the actual time has moved on 14 min, so her watch will only have moved on 7 min)

d) 16:30 (the actual time has moved on 1 hr 52 min, so her watch will only have moved on 56 min)