Q1.

10% of £84 = £8.40.

5% of £84 = half of 10% = £4.20.

15% = 10% + 5% = £8.40 + £4.20 = £12.60.

Q2.

22% of 140 = 0.22 × 140.

10% of 140 = 14 → 20% = 28 → 2% = 2.8 → 20%+2% = 28 + 2.8 = 30.8.

24% of 128 = 0.24 × 128.

10% of 128 = 12.8 → 20% = 25.6 → 4% = 4 × 1% = 4 × 1.28 = 5.12 → 25.6 + 5.12 = 30.72.

Compare: 30.80 (first) > 30.72 (second).

Q3.

50% = one half → 900 ÷ 2 = 450 g.

Q4.

1% = 1/100 → 350 ÷ 100 = 3.5 L.

Q5.

10% of £220 = £22.00.

8% = 8 × 1% = 8 × (220 ÷ 100 = 2.20) = 8 × £2.20 = £17.60.

18% = 10% + 8% = £22.00 + £17.60 = £ 39.60

Q6.

47% = 0.47 × 760.

760 × 47 = 760×40 + 760×7 = 30,400 + 5,320 = 35,720.

Divide by 100 → 35,720 ÷ 100 = 357.20

Q7.

Lina: 56% of 75 = 0.56 × 75 = (75 × 56) ÷ 100 = 4,200 ÷ 100 = 42 marks.

Sara: 43 marks.

Compare: 43 > 42.

Sara got the higher mark (43 vs 42).

Q8.

$$215\% = 2.15 \times 160 = (215/100)\times 160 = (160\times 215) \div 100.$$

$$160\times 215 = 160\times 200 + 160\times 15 = 32{,}000 + 2{,}400 = 34{,}400.$$

$$34{,}400 \div 100 = 344.$$

Q9.

$$28\% \text{ of } 125 = 0.28 \times 125.$$

$$10\% \text{ of } 125 = 12.5 \rightarrow 20\% = 25 \rightarrow 8\% = 10 \rightarrow 25 + 10 = 35.0.$$

$$30\% \text{ of } 116 = 0.30 \times 116 = 30\% = 3 \times 10\% = 3 \times 11.6 = 34.8.$$

Compare: $35.0 > 34.8$.

28% of 125 is greater ($35.0 > 34.8$).

Q10.

Sam's bonus = $28\% \text{ of } 150 = 0.28 \times 150 = 28 \times 1.5 = 42 \rightarrow$ £42.00.

Jay's bonus = £50.00.

Difference = $50.00 - 42.00 =$ £8.00

£8.00 (Jay's bonus is £8 more)

Q11.

If 20% are children, then 80% are adults.

Let total = T.

Adults = 80% of T → 0.8T = 60 → T = 60 ÷ 0.8 = 75.

So total people = 75 (children = 75 − 60 = 15).

75 people in total

Q12.

Increase = 4% of 42,000 = 0.04 × 42,000 = 1,680.

New pay = 42,000 + 1,680 = £43,680.

Q13.

Shop A price per tin = £2.10 ÷ 3 = £0.70 → for 6 tins: 6 × 0.70 = £4.20

Shop B price per tin = £1.80 ÷ 2 = £0.90 → for 6 tins: 6 × 0.90 = £5.40

Shop A is cheaper (£4.20)

Q14.

Deposit = 12% of 600 = 0.12 × 600 = £72.

Remaining = 600 − 72 = £528.

Number of months = 528 ÷ 20 = 26.4 → Nora must make whole monthly payments, so she needs 27 monthly payments (the last payment will be a smaller final instalment if exactness matters).

Q15.

Banana = 35% of 360 = 0.35 × 360 = 35 × 3.6? (do direct) 10% of 360 = 36 → 30% = 108 → 5% = 18 → 30%+5% = 108 + 18 = 126.

Check: yes 0.35×360 = 126.

Lemon = total − vanilla − banana = 360 − 110 − 126 = 360 − 236 = 124.

Q16.

SHOP A

Normal price = 48p.

Discount = 5% of 48p = $0.05 \times 48 = 2.4$pence.

Discounted price per tin = $48 - 2.4 = 45.6$pence.

Cost for 6 tins = $6 \times 45.6 = 273.6$pence = £2.736.

SHOP B

Buy 2 get 1 free means you get 3 tins for the price of 2.

For 6 tins you can use two such offers (two groups of 3).

Paid tins = 2 groups × 2 paid tins = 4 paid tins.

Cost = $4 \times 65\text{p} = 260$pence = £2.60.

Shop A: £2.736 (≈ £2.74) for 6 tins.

Shop B: £2.60 for 6 tins.

Conclusion: Shop B is cheaper.

Difference = $273.6\text{p} - 260\text{p} = 13.6$pence (≈ £0.14).

So Lina should buy the 6 tins from Shop B.

Q17.

20% of £36.80 = 0.20×36.80.

$0.20 \times 36.80 = 7.36$(pounds).

Sale price = Normal price − Discount = $36.80 - 7.36 = £29.44$

Q18.

Principal = £500, rate = 1.5% = 0.015, time = 4 years.

Interest = Principal × rate × time

Interest = $500 \times 0.015 \times 4$

$= 500 \times 0.06$

$= £30.00$

Q19.

Principal = £800, rate = 2% = 0.02, time = 3 years.

Interest = Principal × rate × time

$$\text{Interest} = 800 \times 0.02 \times 3$$

$$= 800 \times 0.06$$

$$= £48.00.$$
