

**ARITHMETIC (Q 1, PAPER 1)**

**1999**

- 1 (a) IR£40 is divided between two pupils in the ratio 7:3. How much does each pupil get?
- (b) A car journey of 559 kilometres took 6 hours and 30 minutes.
- (i) Calculate the average speed, in km/hr, for the journey.
- (ii) If the average petrol consumption for the journey was 8.3 kilometres per litre, calculate the number of litres of petrol used, correct to the nearest litre.
- (c) A holiday complex consists of three different types of chalet.

Chalet Type	No. of Chalets	No. of people per chalet	Weekly rent per chalet
Type A	12	5	IR£300
Type B	20	6	IR£350
Type C	14	8	IR£450

During one week in July all chalets are fully occupied.

- (i) Calculate the number of people staying in the chalets at the holiday complex that week.
- (ii) Calculate the total amount of rent paid for that week.

In the last week of September, a 35% discount is offered on the weekly rent of a type C chalet. Calculate the weekly rent on a type C chalet for the last week in September.

**SOLUTION**

1 (a)  $7 + 3 = 10$

First pupil:  $\frac{7}{10} \times 40 = \text{£}28$

Second pupil:  $\frac{3}{10} \times 40 = \text{£}12$

1 (b) (i) Distance  $s = 559$  km, time  $t = 6$  hours 30 minutes = 6.5 hours, speed  $v = ?$

$$v = \frac{559 \text{ km}}{6.5 \text{ h}} = 86 \text{ km/h}$$

$$v = \frac{s}{t} \dots\dots 4$$

1 (b) (ii) How many 8.3 km are contained in 559 km?

$$\text{No. of litres} = \frac{559}{8.3} = 67 \text{ litres}$$

**1 (c) (i)**

Type A: There are 12 chalets with 5 people per chalet:  $12 \times 5 = 60$  people

Type B: There are 20 chalets with 6 people per chalet:  $20 \times 6 = 120$  people

Type C: There are 14 chalets with 8 people per chalet:  $14 \times 8 = 112$  people

Total: 292 people

**1 (c) (ii)**

Type A: There are 12 chalets costing £300 per chalet:  $12 \times 300 = £3,600$

Type B: There are 20 chalets costing £350 per chalet:  $20 \times 350 = £7,000$

Type C: There are 14 chalets costing £450 per chalet:  $14 \times 450 = £6,300$

Total: £16,900

In the last week of September a 35% discount is offered on Type C chalets. This means that 65% of the price is payable.

Price:  $0.65 \times £450 = £292.50$