

Pages 48-49 — Formulas and Combinations

1) Perimeter = $6 \times 20 = 120$ cm
(1 mark)

- 2) **Chocolate and vanilla**
Strawberry and caramel
(1 mark for both combinations)

3) Amount paid = $7 \times 9 + 10$
 $= 63 + 10 = \text{£}73$ (1 mark)

$$\begin{aligned} \text{Amount paid} &= 7 \times 20 + 10 \\ &= 140 + 10 = \text{£}150 \end{aligned}$$

$$\text{£}150 - \text{£}73 = \text{£}77 \text{ (1 mark)}$$

Alternatively, you could work out the difference in hours first.

4) Total weight =
 $150 \times \text{Number of apples} +$
 $200 \times \text{Number of oranges}$
(1 mark)

$$\begin{aligned} \text{Total weight} &= 150 \times 4 + 200 \times 6 \\ &= 600 + 1200 = \text{1800 g (1 mark)} \end{aligned}$$

5) $\text{Cost} = \text{£}2.40 + 50\text{p} \times 8$
 $= \text{£}2.40 + \text{£}4 = \text{£}6.40$ (1 mark)

n = number of beads on
Jemma's necklace.

$$\text{£}7.90 = \text{£}2.40 + 50\text{p} \times n$$

$$\text{£}5.50 = \text{£}0.50 \times n$$

$$n = \text{£}5.50 \div \text{£}0.50 = 11$$

So there are **11** beads on
Jemma's necklace. (2 marks for
the correct answer. Otherwise
1 mark for setting $\text{£}7.90$ equal to
the cost formula and attempting
to solve.)