Efficient strategies

6 questions | 9 marks

Equivalent correct methods earn the corresponding marks.

1. Use a near-round number to find 19 × 7. [2 marks]

20 × 7 = 140.

Remove one group of 7: 140 − 7 = 133.

Answer: 133.

2. Use doubling and halving to find 25 × 8. [1 mark]

25 × 8 = 50 × 4 = 100 × 2 = 200.

Answer: 200.

3. Find 84 ÷ 4 using 80 + 4. [1 mark]

80 ÷ 4 = 20; 4 ÷ 4 = 1.

20 + 1 = 21.

Answer: 21.

4. Find 2 × 7 × 5 by grouping useful factors. [1 mark]

2 × 5 = 10, so the product is 7 × 10 = 70.

Answer: 70.

5. A school buys 18 packs of 5 pencils. Show two different ways to find the total. [2 marks]

Method 1: 10 × 5 + 8 × 5 = 50 + 40 = 90.

Method 2: 18 × 10 ÷ 2 = 180 ÷ 2 = 90.

Answer: 90 pencils.

6. A learner changes 16 × 6 into 32 × 3. Is this valid? Explain and calculate. [2 marks]

One factor is doubled and the other halved, so the product stays the same.

32 × 3 = 96; check 16 × 6 = 10 × 6 + 6 × 6 = 60 + 36 = 96.

Answer: Yes; both products equal 96.