Efficient calculation and estimation

6 questions | 12 marks

Equivalent correct methods earn the corresponding marks.

1. Use compensation to calculate 497+358. [2 marks]

500+358−3=855.

Answer: 855.

2. Calculate 25×28 by making a factor of 100. [2 marks]

25×4×7=100×7=700.

Answer: 700.

3. Calculate 1,002−498 efficiently. [2 marks]

1,002−500+2=504.

Answer: 504.

4. Estimate 61×39 using convenient tens. [1 mark]

60×40=2,400.

Answer: About 2,400.

5. A calculator shows 7,200 for 48×15. Explain why this is unreasonable, then correct it. [3 marks]

50×15 is about 750. Exactly, 48×10+48×5=480+240=720.

Answer: It is about ten times too large; the correct answer is 720.

6. A club has 178 people. Each bus seats 40. How many buses are needed? [2 marks]

Four seat 160, leaving 18 people, so one more is needed.

Answer: 5 buses.