Test answers - Addition and subtraction with 3-digit numbers

Year: Year 3 · Duration: 30 minutes · /20

Answer to Question 1 (4 marks)

a. **576**: 346 + 200 = 546, 546 + 30 = 576. (1)
b. **618**: 708 − 100 = 608, then 608 + 10 = 618. (1)
c. Ones: 7 + 8 = 15 (write 5, exchange 1 ten). Tens: 8 + 6 + 1 = 15 (write 5, exchange 1 hundred). Hundreds: 2 + 1 + 1 = 4. Answer: **455**. (2)

Answer to Question 2 (4 marks)

a. Ones: exchange 1 ten for 10 ones: 12 − 5 = 7. Tens: exchange 1 hundred for 10 tens: 12 − 8 = 4. Hundreds: 6 − 2 = 4. Answer: **447**. Check: 447 + 285 = 732. (2)
b. 447 + 285 = 732. (1)
c. 700 − 300 = 400. The answer 447 is close to 400. (1)

Answer to Question 3 (4 marks)

a. The missing number plus 246 makes 700, so subtract: 700 − 246. Count on from 246: 4 to 250, 50 to 300, 400 to 700. 4 + 50 + 400 = **454**. Check: 454 + 246 = 700. (2 marks: 1 for the inverse, 1 for 454)
b. 513 minus the missing number leaves 268, so the missing number is 513 − 268. Count on from 268: 32 to 300, then 213 to 513. 32 + 213 = **245**. Check: 513 − 245 = 268. (2 marks: 1 for the method, 1 for 245)

Answer to Question 4 (4 marks)

a. Add in two steps: 134 + 215 = 349, then 349 + 86 = 435. They sold **435** items. (2 marks: 1 for each correct step)
b. They started with 500. Count on from 435 to 500: 5 to reach 440, then 60 to reach 500. **65** items were left. (1 mark)
c. Round each number to the nearest 100: 134 is about 100, 215 is about 200, 86 is about 100. 100 + 200 + 100 = **400**, which is close to 435, so the answer is sensible. (1 mark)

Answer to Question 5 (4 marks)

a. Add the coat and the gloves: 175 + 48. Ones: 5 + 8 = 13, write 3 carry 1. Tens: 7 + 4 + 1 = 12, write 2 carry 1. Hundreds: 1 + 1 = 2. She spends **£223**. (2 marks: 1 for adding, 1 for £223)
b. Subtract from £350: 350 − 223. 350 − 200 = 150, 150 − 20 = 130, 130 − 3 = **£127** left. Check: 127 + 223 = 350. (2 marks: 1 for the subtraction, 1 for £127)