Test answers - Short multiplication and division

Year: Year 4 · Duration: 40 minutes · /20

Answer to Question 1 (4 marks)

a. Multiplying by 10 moves each digit one place to the left and a 0 fills the ones: 48 × 10 = **480** (1 mark).
b. Multiplying by 100 moves each digit two places to the left: 27 × 100 = **2 700** (1 mark).
c. 80 is 8 × 10. Use the fact 6 × 8 = 48, then multiply by 10: 6 × 80 = **480** (1 mark).
d. 300 is 3 × 100. Use 7 × 3 = 21, then multiply by 100: 7 × 300 = **2 100** (1 mark).

Answer to Question 2 (4 marks)

a. Ones: 3 × 6 = 18, write 8 and carry 1. Tens: 5 × 6 + 1 (carried) = 31, write 1 and carry 3. Hundreds: 1 × 6 + 3 (carried) = 9, write 9. Answer: **918**. (2 marks)
b. Ones: 7 × 4 = 28, write 8 and carry 2. Tens: 0 × 4 + 2 (carried) = 2, write 2. Hundreds: 4 × 4 = 16, write 6 and carry 1. Thousands: 2 × 4 + 1 (carried) = 9, write 9. Answer: **9 628**. (2 marks)

Answer to Question 3 (4 marks)

a. Hundreds: 9 ÷ 4 = 2 remainder 1. Tens: 13 (1 carried to the next digit 3) ÷ 4 = 3 remainder 1. Ones: 16 (1 carried to the next digit 6) ÷ 4 = 4. Answer: **234**. (2 marks)
b. Hundreds: 2 is less than 6, so there is no hundreds digit in the answer; carry 2 to the next column. Tens: 27 (2 carried to the next digit 7) ÷ 6 = 4 remainder 3. Ones: 35 (3 carried to the next digit 5) ÷ 6 = 5 remainder 5. Answer: **45 remainder 5**. (2 marks)

Answer to Question 4 (4 marks)

a. 7 × 24: Ones: 4 × 7 = 28, write 8 and carry 2. Tens: 2 × 7 + 2 (carried) = 16, write 16. Answer: **168**. (2 marks)
b. 168 × £3: Ones: 8 × 3 = 24, write 4 and carry 2. Tens: 6 × 3 + 2 (carried) = 20, write 0 and carry 2. Hundreds: 1 × 3 + 2 (carried) = 5, write 5. Answer: **504**. So **£504** (2 marks)

Answer to Question 5 (4 marks)

a. 100 ÷ 8 = 12 remainder 4, because 12 × 8 = 96 and 100 − 96 = 4. The 4 children left over still need a seat, so we round up: **13** tables (2 marks: 1 for 12 r 4, 1 for rounding up to 13).
b. Every table gets a prize, so 13 prizes at £6 each: 13 × £6 = 10 × £6 + 3 × £6 = £60 + £18 = **£78** (1 mark).
c. 12 full tables hold 96 children. 100 − 96 = **4** children have no seat at a full table, which is why the 13th table is needed (1 mark).