Test answers - The four operations, order of operations and long division

Year: Year 6 · Duration: 40 minutes · /20

Answer to Question 1 (3 marks)

a. 4 718 × 6 = 28 308 and 4 718 × 30 = 141 540. Add: **169 848**. (1 mark)
b. 14 into 29 goes 2 (28), remainder 1. Bring down 1: 14 into 11 goes 0. Bring down 2: 112 ÷ 14 = 8. Answer **208**. (1 mark)
c. 16 × 62 = 992, remainder 8, and 8 ÷ 16 = 0.5. Answer **62.5**. (1 mark)

Answer to Question 2 (4 marks)

a. 6 × 4 = 24, so 9 + 24 = **33**. (1 mark)
b. 15 × 4 = **60**. (1 mark)
c. $2^2 = 4$, 18 ÷ 3 = 6, then 30 − 6 + 4 = **28**. (1 mark)
d. (2 + 5) × 3 + 1 = 7 × 3 + 1 = **22**. (1 mark)

Answer to Question 3 (4 marks)

a. 1, 2, 4, 5, 8, 10, 20, 40. (1 mark)
b. Factors of 48 include 1, 2, 3, 4, 6, 8, 12, 16, 24, 48. The HCF is **8**. (1 mark)
c. Multiples of 10: 10, 20, 30, ... Multiples of 15: 15, 30, ... The LCM is **30**. (1 mark)
d. **37 and 59** are prime. 39 = 3 × 13, 49 = 7 × 7 and 51 = 3 × 17. (1 mark)

Answer to Question 4 (4 marks)

a. Add the three items: 85 + 40 + 35 = **160p**, which is £1.60. (1 mark)
b. 126 × 160 = 126 × 100 + 126 × 60 = 12 600 + 7 560 = 20 160p = **£201.60**. (2 marks)
c. £150 = 15 000p and 15 000 ÷ 160 = 93.75. Only whole lunch boxes count, so round down: **93 boxes** (93 × 160p = £148.80). (1 mark)

Answer to Question 5 (5 marks)

a. 215 × 18 = 2 150 + 1 720 = **£3 870**. (1 mark)
b. 14 × 24 = **£336**. (1 mark)
c. 215 + 14 = 229 people. 229 ÷ 48 = 4 remainder 37, so 4 coaches would leave 37 people behind. We need **5 coaches**. (1 mark)

d. Coaches: 5 × 420 = £2 100. Total: 3 870 + 336 + 2 100 = **£6 306**. (1 mark)
e. 6 306 ÷ 215 = 29.33..., so **£29.33** each. (1 mark)