

Answer Key — Long Division — No Remainder

Year 4 Mathematics · Number and algebra · WA4MNADI1

Section A — Fluency (16 marks, 1 mark each)

1. 21
2. 16
3. 15
4. 13
5. 24
6. 14
7. 14
8. 19
9. 19
10. 27
11. 23
12. 23
13. 13
14. 31
15. 14
16. 16

Section B — Core (21 marks)

1. $735 \div 5 = 147$ rows. [2 marks working, 1 mark correct answer]
2. $864 \div 8 = 108$ boxes printed; $108 - 3 = 105$ boxes remain. [2 marks first step, 2 marks second step]
3. $936 \div 6 = 156$ boxes. [2 marks working, 1 mark correct answer]
4. $972 \div 4 = 243$ crates made; $243 - 25 = 218$ crates left for other warehouses. [2 marks first step, 2 marks second step]
5. $648 \div 8 = 81$ bags. [2 marks working, 1 mark correct answer]
6. $756 \div 7 = 108$ groups to start; $108 - 15 = 93$ groups remain in the original room. [2 marks first step, 2 marks second step]

Section C — Reasoning (9 marks) — sample responses, award marks for valid reasoning

1. Divide the tens digit by 4 first: $8 \div 4 = 2$ (tens), then the ones digit: $4 \div 4 = 1$ (ones), giving $84 \div 4 = 21$. [2 marks]
2. Multiply the quotient by the divisor and check it equals the original number: $156 \times 6 = 936$, which matches, so the division is correct. [2 marks]
3. No, Jamal is incorrect. Many 3-digit numbers divide exactly by a 1-digit number, e.g. $936 \div 6 = 156$ with no remainder. [2 marks]
4. False. The standard written algorithm works from the left-most (largest place value) digit first, dividing each digit in turn from the highest place value down to the ones. [2 marks]

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Section D — Challenge (7 marks)

1. Any valid example works, e.g. $855 \div 9 = 95$, which is a 3-digit dividend with a quotient between 90 and 100. [2 marks]
2. $124 \times 8 = 992$, so the number is 992. [2 marks]
3. $1,260 \div 6 = 210$ boxes of 6; $1,260 \div 9 = 140$ boxes of 9. The box of 9 uses fewer boxes (140 vs 210). [2 marks correct totals, 1 mark correct comparison]