



KS2.M-Y5N3 Multiplication and Division: Formal Written Methods

Calculators not allowed · about 60 minutes

Total Marks

Name: _____ Date: ____ / ____ / ____

Answer ALL questions. Show all your working.

- 1** Multiply 48 by 6.

(2)

- 2** A baker packs 125 cupcakes into boxes of 5. How many boxes does he need?

(2)

- 3** Work out 276×4 using formal written multiplication.

(2)

- 4** A teacher orders 38 packs of coloured pencils. Each pack contains 12 pencils. How many pencils are there in total?

(2)

5 Multiply 1,203 by 7. Show your method.

(3)

6 Divide 961 by 3. Write the quotient and the remainder if there is one.

(2)

7 A garden centre packs bulbs into bags of 9. They have 2,517 bulbs. How many full bags can they make and how many bulbs are left over?

(2)

8 Work out 324×26 . Show your working clearly.

(2)

9 A school needs 3,745 crayons. Crayons come in boxes of 24. How many boxes must the school order to have at least 3,745 crayons?

(3)

10 Multiply 5,006 by 3.

(2)

- 11** A charity packs tins into crates of 18. They have 14,976 tins. How many full crates can they fill?

(2)

-
- 12** Work out $2,315 \times 14$. Show your method.

(2)

-
- 13** A coach holds 53 passengers. How many coaches do you need to carry 2,965 people? Show how you decided.

(2)

-
- 14** Explain your answer: Is 4,032 divisible by 8? Show working to support your answer.

(3)

-
- 15** Work out 789×32 showing the columns or partitioning you use.

(2)

-
- 16** Divide 7,204 by 6. Give the quotient and remainder if any.

(2)

- 17** Explain your answer: If 256 activity packs are shared equally between 9 classes, will there be any packs left over? Show how you know.

(3)

-
- 18** A factory makes 4,125 widgets each day. How many widgets are made in 37 days? Show your method.

(3)

Mark scheme • KS2.M-Y5N3 Multiplication and Division: Formal Written Methods

Question 1

- **M1** Correct short multiplication method or partitioning ($48 \times 6 = (40+8) \times 6$) seen
- **A1** 288 cao
- **Answer: 288**

Question 2

- **M1** Correct division method shown ($125 \div 5$) or grouping into fives
- **A1** 25 cao
- **Answer: 25**

Question 3

- **M1** Correct column multiplication shown (276×4) or equivalent partitioning
- **A1** 1,104 cao
- **Answer: 1104**

Question 4

- **M1** Correct multiplication method shown (38×12 or $38 \times (10+2)$)
- **A1** 456 cao
- **Answer: 456**

Question 5

- **M1** Correct column multiplication steps shown with at most one arithmetic error
- **M1** Correct handling of any carries seen
- **A1** 8,421 cao
- **Answer: 8421**

Question 6

- **M1** Correct short division method shown ($961 \div 3$) or chunking
- **A1** 320 r1 cao
- **Answer: 320 r1**

Question 7

- **M1** Correct division method shown ($2,517 \div 9$) or repeated subtraction
- **A1** 279 r6 cao
- **Answer: 279 r6**

Question 8

- **M1** Correct partitioning or long multiplication steps (324×26 shown)
- **A1** 8,424 cao
- **Answer: 8424**

Question 9

- **M1** Correct division or ceiling method shown ($3,745 \div 24$) and rounding up if necessary
- **M1** Correct calculation to find smallest whole number of boxes
- **A1** 157 cao
- **Answer: 157**

Question 10

- **M1** Correct short multiplication method or partitioning seen
- **A1** 15,018 cao
- **Answer: 15018**

Question 11

- **M1** Correct division method shown ($14,976 \div 18$) or grouping
- **A1** 832 cao
- **Answer: 832**

Question 12

- **M1** Correct long multiplication or partitioning shown ($2,315 \times 14$)
- **A1** 32,410 cao
- **Answer: 32410**

Question 13

- **M1** Correct division and recognition to round up ($2,965 \div 53$)
- **A1** 56 cao
- **Answer: 56**

Question 14

- **M1** Shows a correct divisibility check for 8 (last three digits 032 or dividing last three digits by 8) or performs short division
- **A1** Correct result that $4,032 \div 8 = 504$ or equivalent cao
- **A1** A clear statement that 4,032 is divisible by 8, with supporting working oe
- **Answer: Yes. $4,032 \div 8 = 504$**

Question 15

- **M1** Correct long multiplication or partitioning ($789 \times (30+2)$) shown
- **A1** 25,248 cao
- **Answer: 25248**

Question 16

- **M1** Correct short division or chunking shown ($7,204 \div 6$)
- **A1** 1,200 r4 cao
- **Answer: 1200 r4**

Question 17

- **M1** Correct division attempt ($256 \div 9$) or use of digital sum reasoning to find remainder
- **A1** Quotient 28 and remainder 4 or equivalent shown (28 r4)
- **A1** Clear statement that 4 packs would be left over with supporting working
- **Answer: 28 r4**

Question 18

- **M1** Correct long multiplication or partitioning shown ($4,125 \times 37$ or $\times (30+7)$)
- **M1** Correct addition of partial products
- **A1** 152,625 cao
- **Answer: 152625**