3.2 Written Methods: Multiplication and Division: Test Pack

NCETM KS2 National Curriculum Mathematics - NCETM Calculation Policy and Written Methods Progression · Calculators not allowed · about 60 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Use the formal written method (short multiplication) to calculate 34 x 6.

(1)

2 Bella knows that 88 x 16 = 1,408.

Use this to work out 88 x 160.

Answer: ___

(1)

3 Use the formal written method for long division to calculate 552 divided by 24.

(3)

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4 A charity is packing 618 tins of food into boxes for a foodbank. Each box holds 24 tins.

(a) Use the formal written method for long division to calculate 618 divided by 24, giving your answer with a remainder. **(3)**

.....

(b) The charity needs enough boxes so that every tin is packed. How many boxes are needed in total? **(1)**

.....

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5 Amir divides 3,192 by 24 and gets an answer of 132. Use multiplication to check whether Amir's answer is correct, showing your working, and write down the correct answer.

.....

.....

.....

(3)

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6 A relay team runs a total distance of 32.4 km, split equally between 6 runners. Use a formal written method to calculate how far each runner runs.

(3)

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7 A factory makes 2,469 chocolate bars in one day. The bars are packed into boxes of 16.

(a) Use the formal written method for long division to calculate how many boxes can be completely filled, and how many bars are left over. **(3)**

.....

(b) The 5 remaining bars are given away as free samples. The manager also donates 3 full boxes to a local school. How many boxes of chocolate bars are left for the factory to sell? **(1)**

.....

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8 A printer produces revision booklets. Printing one booklet uses 24 sheets of paper. The printer has 18 reams of paper, and each ream contains 500 sheets.

(a) Use a formal written method to calculate the total number of sheets of paper available. **(2)**

.....

(b) Use a formal written method for long division to calculate the greatest number of complete booklets that can be printed from this paper, and state how many sheets would be left over. **(3)**

.....

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9 Each taxi has 18 seats. There are 315 people to carry.

What is the smallest number of taxis needed?

Answer: ___

(2)

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10 31395 divided by 39 =

Answer: ___

(2)

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11 Work out 1,763 divided by 43.

Use a formal written method.

Answer: ___

(2)

---

12 982 x 70 =

Answer: ___

(2)

---

13 Work out 1,952 divided by 9.

Give your answer as a whole number and a remainder.

Answer: ___

(2)

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14 A school orders 34 boxes of pencils. Each box contains 216 pencils. Use the formal written method (long multiplication) to calculate how many pencils the school orders in total.

(3)

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15 Use short division to calculate 936 divided by 8.

(2)

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16 Use the formal written method (long multiplication) to calculate 46 x 23.

(3)

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17 A minibus can carry 7 children.

(a) Use short division to calculate 258 divided by 7, giving your answer with a remainder. **(2)**

.....

(b) 258 children are going on a school trip. How many minibuses like this are needed to take every child? **(1)**

.....

18 A baker has 250 buns. She packs them into boxes of 8 buns each. How many boxes will be completely full?

- ☐ A) 30
- ☐ B) 31
- ☐ C) 32
- ☐ D) 33

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Mark scheme · 3.2 Written Methods: Multiplication and Division: Test Pack

A correct answer earns full marks unless the question asks for working, a method, proof or explanation.

Question 1

204 cao	B1

Answer: **204**

Question 2

14,080 cao	B1

Answer: **14,080**

Question 3

24 x 20 = 480 oe (chunking or long division first step)	M1
24 x 3 = 72, running total 552 oe	M1
23 cao	A1

Answer: **23**

Question 4

(a) 24 x 20 = 480 oe	M1
(a) 24 x 5 = 120, running total 600 oe	M1
(a) 25 r 18 oe cao	A1

(a) Answer: **25 r 18**

(b) 26 (ft from (a), rounded up so the remaining 18 tins are packed) cao	B1

(b) Answer: **26**

Question 5

132 x 24 calculated correctly, e.g. 132 x 20 = 2640 and 132 x 4 = 528 oe	M1
3168 found and correctly compared with 3192, concluding Amir is incorrect oe	A1
correct answer of 133 stated with a supporting check, e.g. 133 x 24 = 3192 oe	B1

Answer: **Incorrect; correct answer is 133**

Question 6

324 divided by 6 = 54 oe (ignoring the decimal point)	M1
correct decimal place value adjustment shown, e.g. dividing by 10 oe	M1
5.4 km cao	A1

Answer: **5.4 km**

Question 7

(a) 16 x 150 = 2400 oe	M1
(a) 16 x 4 = 64, running total 2464 oe	M1
(a) 154 r 5 oe cao	A1

(a) Answer: **154 r 5**

(b) 151 (ft: 154 minus 3) cao	B1

(b) Answer: **151**

Question 8

(a) 500 x 18 partitioned or carried correctly, e.g. 500 x 10 = 5000 and 500 x 8 = 4000 oe	M1
(a) 9000 (sheets) cao	A1

(a) Answer: **9000 sheets**

(b) 24 x 300 = 7200 oe	M1
(b) 24 x 75 = 1800, running total 9000 oe	M1
(b) 375 booklets with 0 sheets left over cao	A1

(b) Answer: **375 booklets, 0 sheets left over**

Question 9

315 / 18 = 17 remainder 9 seen	M1
18 cao	A1

Answer: **18**

Question 10

uses a formal method of division with not more than one arithmetic error	M1
805 cao	A1

Answer: **805**

Question 11

a correct method of long division with not more than one error	M1
41 cao	A1

Answer: **41**

Question 12

uses a formal written method with not more than one arithmetic error	M1
68740 cao	A1

Answer: **68740**

Question 13

short division method seen	M1
216 remainder 8 cao	A1

Answer: **216 remainder 8**

Question 14

one correct partial product, e.g. 216 x 4 = 864 oe	M1
second correct partial product, e.g. 216 x 30 = 6480 oe	M1
7344 (pencils) cao	A1

Answer: **7344 pencils**

Question 15

correct division working shown, e.g. 8 x 100 = 800 then 8 x 17 = 136 oe	M1
117 cao	A1

Answer: **117**

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Question 16

one correct partial product, e.g. 46 x 20 = 920 oe	**M1**
second correct partial product, e.g. 46 x 3 = 138 oe	**M1**
1058 cao	**A1**

Answer: **1058**

Question 17

(a) correct division working shown, e.g. 7 x 36 = 252 oe	**M1**
(a) 36 r 6 oe cao	**A1**

(a) Answer: **36 r 6**

(b) 37 (ft from (a), rounded up so every child has a seat) cao	**B1**

(b) Answer: **37**

Question 18

B (31) cao	**B1**

Answer: **B**

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