3.6 Multiplication and Division: Formal Written Methods: 2-hour Pack

Total Marks

Calculators not allowed · about 120 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Work out 747 x 18.

Use a formal written method.

Answer: ___

(2)

---

2 Work out 28 x 40.

Use a formal written method.

Answer: ___

(2)

---

3 Work out 5,653 x 89.

Use a formal written method.

Answer: ___

(2)

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4 Freya has 4 boxes with 3,052 marbles in each box and 6,485 loose marbles.

How many marbles does Freya have altogether?

Answer: ___

(2)

---

5 Work out 7,739 divided by 9.

Give your answer as a whole number and a remainder.

Answer: ___

(2)

---

6 Each minibus has 16 seats. There are 90 children to carry.

What is the smallest number of minibuses needed?

Answer: ___

(2)

---

7 Toys cost £6.33 each. Reece buys 4 and pays with £40.

How much change does Reece get?

Answer: £___

(2)

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8 Books cost £4.92 each. Isla buys 10 and pays with £60.

How much change does Isla get?

Answer: £___

(2)

---

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

(3)

---

10 Each coach has 9 seats. There are 275 pupils to carry.

What is the smallest number of coaches needed?

Answer: ___

(2)

---

11 Each box has 9 spaces. There are 284 eggs to carry.

What is the smallest number of boxes needed?

Answer: ___

(2)

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12 Oscar knows that 95 x 31 = 2,945.

Use this to work out 2,945 divided by 31.

Answer: ___

(1)

---

13 Jack has 3 boxes with 1,333 coins in each box and 1,922 loose coins.

How many coins does Jack have altogether?

Answer: ___

(2)

---

14 Books cost £8.39 each. Sofia buys 9 and pays with £80.

How much change does Sofia get?

Answer: £___

(2)

---

15 Each minibus has 4 seats. There are 358 children to carry.

What is the smallest number of minibuses needed?

Answer: ___

(2)

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16 Work out 2,442 divided by 5.

Give your answer as a whole number and a remainder.

Answer: ___

(2)

---

17 Work out 10,382 divided by 29.

Use a formal written method.

Answer: ___

(2)

---

18 Each minibus has 16 seats. There are 127 children to carry.

What is the smallest number of minibuses needed?

Answer: ___

(2)

---

19 Work out 3,297 x 28.

Use a formal written method.

Answer: ___

(2)

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20 Work out 8,626 x 20.

Use a formal written method.

Answer: ___

(2)

---

21 Work out 6,700 divided by 25.

Use a formal written method.

Answer: ___

(2)

---

22 Work out 59 x 76.

Use a formal written method.

Answer: ___

(2)

---

23 Books cost £7.47 each. Nia buys 4 and pays with £40.

How much change does Nia get?

Answer: £___

(2)

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24 Plants cost £4.54 each. Callum buys 8 and pays with £40.

How much change does Callum get?

Answer: £___

(2)

---

25 Ella has 7,292 beads. Ella puts 3,665 aside and shares the rest equally between 9 friends.

How many beads does each friend get?

Answer: ___

(2)

---

26 Dev has 3 boxes with 3,536 coins in each box and 5,975 loose coins.

How many coins does Dev have altogether?

Answer: ___

(2)

---

27 Victor has 2 boxes with 936 marbles in each box and 4,855 loose marbles.

How many marbles does Victor have altogether?

Answer: ___

(2)

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28 330 x 3 =

Answer: ___

(1)

---

29 Work out 331 x 48.

Use a formal written method.

Answer: ___

(2)

---

30 192 divided by 3 =

Answer: ___

(1)

---

31 Work out 70 x 15.

Use a formal written method.

Answer: ___

(2)

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32 Work out 799 x 12.

Use a formal written method.

Answer: ___

(2)

---

33 Each minibus has 5 seats. There are 237 children to carry.

What is the smallest number of minibuses needed?

Answer: ___

(2)

---

34 Work out 32 x 76.

Use a formal written method.

Answer: ___

(2)

---

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

(2)

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36 Tickets cost £5.42 each. Nia buys 6.

How much does Nia pay?

Answer: £___

(2)

---

37 Mateo has 8 boxes with 2,712 coins in each box and 8,762 loose coins.

How many coins does Mateo have altogether?

Answer: ___

(2)

---

38 Each coach has 32 seats. There are 91 pupils to carry.

What is the smallest number of coaches needed?

Answer: ___

(2)

---

39 Work out 522 x 27.

Use a formal written method.

Answer: ___

(2)

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40 Notebooks cost £2.78 each. Aaron buys 11 and pays with £40.

How much change does Aaron get?

Answer: £___

(2)

---

41 Each taxi has 35 seats. There are 254 people to carry.

What is the smallest number of taxis needed?

Answer: ___

(2)

---

42 Tom knows that 98 x 40 = 3,920.

Use this to work out 3,920 divided by 40.

Answer: ___

(1)

---

43 Each tray has 11 spaces. There are 109 cakes to carry.

What is the smallest number of trays needed?

Answer: ___

(2)

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44 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)

---

45 Work out 2,178 divided by 18.

Use a formal written method.

Answer: ___

(2)

---

46 57 x 6 =

Answer: ___

(1)

---

47 Work out 683 x 23.

Use a formal written method.

Answer: ___

(2)

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48 Each tray has 16 spaces. There are 115 cakes to carry.

What is the smallest number of trays needed?

Answer: ___

(2)

---

49 Each taxi has 13 seats. There are 254 people to carry.

What is the smallest number of taxis needed?

Answer: ___

(2)

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Mark scheme · 3.6 Multiplication and Division: Formal Written Methods: 2-hour Pack

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

Question 1

a formal method with partial products and not more than one arithmetic error	M1
13,446 cao	A1

Answer: **13,446**

Question 2

a formal method with partial products and not more than one arithmetic error	M1
1,120 cao	A1

Answer: **1,120**

Question 3

a formal method with partial products and not more than one arithmetic error	M1
503,117 cao	A1

Answer: **503,117**

Question 4

4 x 3,052 = 12,208 seen	M1
18,693 cao	A1

Answer: **18,693**

Question 5

short division method seen	M1
859 remainder 8 cao	A1

Answer: **859 remainder 8**

Question 6

90 / 16 = 5 remainder 10 seen	M1
6 cao	A1

Answer: **6**

Question 7

6.33 x 4 = 25.32 seen	M1
£14.68 cao	A1

Answer: **£14.68**

Question 8

4.92 x 10 = 49.20 seen	M1
£10.80 cao	A1

Answer: **£10.80**

Question 9

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

Answer: **8421**

Question 10

275 / 9 = 30 remainder 5 seen	M1
31 cao	A1

Answer: **31**

Question 11

284 / 9 = 31 remainder 5 seen	M1
32 cao	A1

Answer: **32**

Question 12

95 cao	B1

Answer: **95**

Question 13

3 x 1,333 = 3,999 seen	M1
5,921 cao	A1

Answer: **5,921**

Question 14

8.39 x 9 = 75.51 seen	M1
£4.49 cao	A1

Answer: **£4.49**

Question 15

358 / 4 = 89 remainder 2 seen	M1
90 cao	A1

Answer: **90**

Question 16

short division method seen	M1
488 remainder 2 cao	A1

Answer: **488 remainder 2**

Question 17

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

Answer: **358**

Question 18

127 / 16 = 7 remainder 15 seen	M1
8 cao	A1

Answer: **8**

Question 19

a formal method with partial products and not more than one arithmetic error	M1
92,316 cao	A1

Answer: **92,316**

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Question 20

a formal method with partial products and not more than one arithmetic error — M1

172,520 cao — A1

Answer: **172,520**

Question 21

a correct method of long division with not more than one error — M1

268 cao — A1

Answer: **268**

Question 22

a formal method with partial products and not more than one arithmetic error — M1

4,484 cao — A1

Answer: **4,484**

Question 23

7.47 x 4 = 29.88 seen — M1

£10.12 cao — A1

Answer: **£10.12**

Question 24

4.54 x 8 = 36.32 seen — M1

£3.68 cao — A1

Answer: **£3.68**

Question 25

3,627 seen — M1

403 cao — A1

Answer: **403**

Question 26

3 x 3,536 = 10,608 seen — M1

16,583 cao — A1

Answer: **16,583**

Question 27

2 x 936 = 1,872 seen — M1

6,727 cao — A1

Answer: **6,727**

Question 28

990 cao — B1

Answer: **990**

Question 29

a formal method with partial products and not more than one arithmetic error — M1

15,888 cao — A1

Answer: **15,888**

Question 30

64 cao — B1

Answer: **64**

Question 31

a formal method with partial products and not more than one arithmetic error — M1

1,050 cao — A1

Answer: **1,050**

Question 32

a formal method with partial products and not more than one arithmetic error — M1

9,588 cao — A1

Answer: **9,588**

Question 33

237 / 5 = 47 remainder 2 seen — M1

48 cao — A1

Answer: **48**

Question 34

a formal method with partial products and not more than one arithmetic error — M1

2,432 cao — A1

Answer: **2,432**

Question 35

Correct partitioning or long multiplication steps (324 x 26 shown) — M1

8,424 cao — A1

Answer: **8424**

Question 36

5.42 x 6 method seen — M1

£32.52 cao — A1

Answer: **£32.52**

Question 37

8 x 2,712 = 21,696 seen — M1

30,458 cao — A1

Answer: **30,458**

Question 38

91 / 32 = 2 remainder 27 seen — M1

3 cao — A1

Answer: **3**

Question 39

a formal method with partial products and not more than one arithmetic error — M1

14,094 cao — A1

Answer: **14,094**

Question 40

2.78 x 11 = 30.58 seen — M1

£9.42 cao — A1

Answer: **£9.42**

Question 41

254 / 35 = 7 remainder 9 seen — M1

8 cao — A1

Answer: **8**

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Question 42

98 cao	B1

Answer: **98**

Question 43

109 / 11 = 9 remainder 10 seen	M1
10 cao	A1

Answer: **10**

Question 44

Correct division or ceiling method shown (3,745 ÷ 24) and rounding up if necessary	M1
Correct calculation to find smallest whole number of boxes	M1
157 cao	A1

Answer: **157**

Question 45

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

Answer: **121**

Question 46

342 cao	B1

Answer: **342**

Question 47

a formal method with partial products and not more than one arithmetic error	M1
15,709 cao	A1

Answer: **15,709**

Question 48

115 / 16 = 7 remainder 3 seen	M1
8 cao	A1

Answer: **8**

Question 49

254 / 13 = 19 remainder 7 seen	M1
20 cao	A1

Answer: **20**

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