1.13 Order of Operations and Multi-Step Problems: 2-hour Pack

Calculators not allowed · about 120 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Kofi works out 6 + 8 x 12. Kofi says the answer is 168. Is Kofi correct? What is the correct answer?

Answer: ___

(2)

---

2 Amira has 4 boxes with 1,779 marbles in each box and 7,651 loose marbles.

How many marbles does Amira have altogether?

Answer: ___

(2)

---

3 Layla buys 10 pencils costing 9p each and 7 bags costing 50p each.

Write one calculation to find the total cost in pence, then work it out.

Answer: ___ p

(2)

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4 Tom buys 2 posters at 82p each, 2 comics at £3.18 each and 4 sandwiches at 59p each. Tom pays with £15.

How much change does Tom get?

Answer: £___

(3)

---

5 (6 + 5) x 5 - 19 =

Answer: ___

(2)

---

6 Ben works out 6 + 9 x 10. Ben says the answer is 150. Is Ben correct? What is the correct answer?

Answer: ___

(2)

---

7 72 divided by 9 + 5 x 13 =

Answer: ___

(2)

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8 Jade has 5 boxes with 1,303 coins in each box and 7,088 loose coins.

How many coins does Jade have altogether?

Answer: ___

(2)

---

9 Each coach has 34 seats. There are 65 pupils to carry.

What is the smallest number of coaches needed?

Answer: ___

(2)

---

10 Ethan buys 8 magnets costing 12p each and 7 bags costing 50p each.

Write one calculation to find the total cost in pence, then work it out.

Answer: ___ p

(2)

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11 Put one pair of brackets in this calculation to make it correct.

9 + 7 x 3 = 48

Write the calculation with the brackets in.

Answer: ___

(2)

---

12 12 x (9 - 1) + 3 squared =

Answer: ___

(2)

---

13 Sana buys 3 packs of pencils. Each pack costs 95p. She pays with a £5.00 note. How much change does she get? Show working.

(2)

---

14 Notebooks cost £1.69 each. Dev buys 12 and pays with £40.

How much change does Dev get?

Answer: £___

(2)

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15 Put one pair of brackets in this calculation to make it correct.

7 + 4 x 9 = 99

Write the calculation with the brackets in.

Answer: ___

(2)

---

16 Dev buys 6 pencils costing 10p each and 3 bags costing 50p each.

Write one calculation to find the total cost in pence, then work it out.

Answer: ___ p

(2)

---

17 9 x (10 - 1) + 3 squared =

Answer: ___

(2)

---

18 8 squared =

Answer: ___

(1)

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19 Noah has 2,726 marbles. Noah is given 2,441 more and then gives away 1,577.

How many marbles does Noah have now?

Answer: ___

(2)

---

20 3 x (8 - 1) + 5 squared =

Answer: ___

(1)

---

21 Noah has 9,963 coins. Noah is given 4,324 more and then gives away 13,907.

How many coins does Noah have now?

Answer: ___

(2)

---

22 Each tray has 14 spaces. There are 86 cakes to carry.

What is the smallest number of trays needed?

Answer: ___

(2)

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23 5 + 2 x 8 - 13 =

Answer: ___

(1)

---

24 6 x (2 - 1) + 3 squared =

Answer: ___

(2)

---

25 Jade has 8,195 marbles. Jade is given 2,392 more and then gives away 6,266.

How many marbles does Jade have now?

Answer: ___

(2)

---

26 Layla has 6,282 stickers. Layla puts 1,522 aside and shares the rest equally between 8 friends.

How many stickers does each friend get?

Answer: ___

(2)

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27 Each minibus has 26 seats. There are 281 children to carry.

What is the smallest number of minibuses needed?

Answer: ___

(2)

---

28 Ben has 3 boxes with 4,628 cards in each box and 3,646 loose cards.

How many cards does Ben have altogether?

Answer: ___

(2)

---

29 Ivan has 8 boxes with 696 marbles in each box and 9,299 loose marbles.

How many marbles does Ivan have altogether?

Answer: ___

(2)

---

30 Ravi has 1,953 coins. Ravi puts 675 aside and shares the rest equally between 9 friends.

How many coins does each friend get?

Answer: ___

(2)

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31 Each box has 13 spaces. There are 280 eggs to carry.

What is the smallest number of boxes needed?

Answer: ___

(2)

---

32 7 + 10 x 3 - 20 =

Answer: ___

(2)

---

33 Callum has 2,363 cards. Callum puts 1,993 aside and shares the rest equally between 5 friends.

How many cards does each friend get?

Answer: ___

(2)

---

34 (7 + 5) x 4 - 6 =

Answer: ___

(1)

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35 Kofi buys 3 postcards costing 3p each and 5 bags costing 50p each.

Write one calculation to find the total cost in pence, then work it out.

Answer: ___ p

(2)

---

36 9 x (5 - 1) + 8 squared =

Answer: ___

(1)

---

37 Put one pair of brackets in this calculation to make it correct.

7 + 9 x 3 = 48

Write the calculation with the brackets in.

Answer: ___

(2)

---

38 Isla works out 6 + 6 x 3. Isla says the answer is 36. Is Isla correct? What is the correct answer?

Answer: ___

(2)

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39 7 x (12 - 1) + 3 squared =

Answer: ___

(1)

---

40 Priya has 2,623 stickers. Priya puts 1,123 aside and shares the rest equally between 6 friends.

How many stickers does each friend get?

Answer: ___

(2)

---

41 Put one pair of brackets in this calculation to make it correct.

8 + 5 x 8 = 104

Write the calculation with the brackets in.

Answer: ___

(2)

---

42 Sofia has 9 boxes with 962 marbles in each box and 5,652 loose marbles.

How many marbles does Sofia have altogether?

Answer: ___

(2)

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43 Ben works out 6 + 12 x 10. Ben says the answer is 180. Is Ben correct? What is the correct answer?

Answer: ___

(2)

---

44 Liam has 240 beads. He makes necklaces that use 15 beads each. He then shares the necklaces equally between 4 friends. How many beads does each friend get? Show working.

(2)

---

45 Victor buys 1 balloon at 92p each and 4 T-shirts at £2.33 each. Victor pays with £15.

How much change does Victor get?

Answer: £___

(2)

---

46 7 cubed =

Answer: ___

(1)

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47 45 divided by 5 + 2 x 9 =

Answer: ___

(2)

---

48 Put one pair of brackets in this calculation to make it correct.

5 + 4 x 6 = 54

Write the calculation with the brackets in.

Answer: ___

(2)

---

49 Toys cost £7.86 each. Kofi buys 11 and pays with £100.

How much change does Kofi get?

Answer: £___

(2)

---

50 Victor has 5 boxes with 4,400 cards in each box and 9,636 loose cards.

How many cards does Victor have altogether?

Answer: ___

(2)

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Mark scheme · 1.13 Order of Operations and Multi-Step Problems: 2-hour Pack

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

Question 1

multiplies before adding	M1
102 cao	A1

Answer: **102**

Question 2

4 x 1,779 = 7,116 seen	M1
14,767 cao	A1

Answer: **14,767**

Question 3

correct calculation seen	M1
440p cao	A1

Answer: **440p**

Question 4

1.64 seen	M1
total 10.36 seen	M1
£4.64 cao	A1

Answer: **£4.64**

Question 5

method seen	M1
36 cao	A1

Answer: **36**

Question 6

multiplies before adding	M1
96 cao	A1

Answer: **96**

Question 7

method seen	M1
73 cao	A1

Answer: **73**

Question 8

5 x 1,303 = 6,515 seen	M1
13,603 cao	A1

Answer: **13,603**

Question 9

65 / 34 = 1 remainder 31 seen	M1
2 cao	A1

Answer: **2**

Question 10

correct calculation seen	M1
446p cao	A1

Answer: **446p**

Question 11

the brackets round the addition	M1
(9 + 7) x 3 = 48 cao	A1

Answer: **(9 + 7) x 3 = 48**

Question 12

method seen	M1
105 cao	A1

Answer: **105**

Question 13

Correct subtraction of total cost from 5.00 or correct total cost seen, e.g. 3 x 0.95 = 2.85	M1
2.15 or £2.15 cao	B1

Answer: **2.15**

Question 14

1.69 x 12 = 20.28 seen	M1
£19.72 cao	A1

Answer: **£19.72**

Question 15

the brackets round the addition	M1
(7 + 4) x 9 = 99 cao	A1

Answer: **(7 + 4) x 9 = 99**

Question 16

correct calculation seen	M1
210p cao	A1

Answer: **210p**

Question 17

method seen	M1
90 cao	A1

Answer: **90**

Question 18

64 cao	B1

Answer: **64**

Question 19

5,167 seen	M1
3,590 cao	A1

Answer: **3,590**

Question 20

46 cao	B1

Answer: **46**

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Question 21

14,287 seen	M1
380 cao	A1

Answer: **380**

Question 22

86 / 14 = 6 remainder 2 seen	M1
7 cao	A1

Answer: **7**

Question 23

8 cao	B1

Answer: **8**

Question 24

method seen	M1
15 cao	A1

Answer: **15**

Question 25

10,587 seen	M1
4,321 cao	A1

Answer: **4,321**

Question 26

4,760 seen	M1
595 cao	A1

Answer: **595**

Question 27

281 / 26 = 10 remainder 21 seen	M1
11 cao	A1

Answer: **11**

Question 28

3 x 4,628 = 13,884 seen	M1
17,530 cao	A1

Answer: **17,530**

Question 29

8 x 696 = 5,568 seen	M1
14,867 cao	A1

Answer: **14,867**

Question 30

1,278 seen	M1
142 cao	A1

Answer: **142**

Question 31

280 / 13 = 21 remainder 7 seen	M1
22 cao	A1

Answer: **22**

Question 32

method seen	M1
17 cao	A1

Answer: **17**

Question 33

370 seen	M1
74 cao	A1

Answer: **74**

Question 34

42 cao	B1

Answer: **42**

Question 35

correct calculation seen	M1
259p cao	A1

Answer: **259p**

Question 36

100 cao	B1

Answer: **100**

Question 37

the brackets round the addition	M1
(7 + 9) x 3 = 48 cao	A1

Answer: **(7 + 9) x 3 = 48**

Question 38

multiplies before adding	M1
24 cao	A1

Answer: **24**

Question 39

86 cao	B1

Answer: **86**

Question 40

1,500 seen	M1
250 cao	A1

Answer: **250**

Question 41

the brackets round the addition	M1
(8 + 5) x 8 = 104 cao	A1

Answer: **(8 + 5) x 8 = 104**

Question 42

9 x 962 = 8,658 seen	M1
14,310 cao	A1

Answer: **14,310**

Question 43

multiplies before adding	M1
126 cao	A1

Answer: **126**

Question 44

Divide 240 by 15 to find number of necklaces, e.g. 240 ÷ 15 = 16	M1
60 cao	B1

Answer: **60**

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Question 45

0.92 seen	**M1**
£4.76 cao	**A1**

Answer: **£4.76**

Question 46

343 cao	**B1**

Answer: **343**

Question 47

method seen	**M1**
27 cao	**A1**

Answer: **27**

Question 48

the brackets round the addition	**M1**
(5 + 4) x 6 = 54 cao	**A1**

Answer: **(5 + 4) x 6 = 54**

Question 49

7.86 x 11 = 86.46 seen	**M1**
£13.54 cao	**A1**

Answer: **£13.54**

Question 50

5 x 4,400 = 22,000 seen	**M1**
31,636 cao	**A1**

Answer: **31,636**

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