1.8 Order of Operations and Calculator Methods: 1-hour Pack

Calculator allowed · about 60 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Work out (2 - (-5)) x 8.

(2)

2 Write down the value of $\sqrt{36}$.

(1)

3 Work out 6 x 4 + 8 x (-8).

(3)

4 Work out 3 x 9 - 8 x 4.

(3)

5 Write down the value of $\sqrt{9}$.

(1)

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6 Work out (2 - (-7)) x 4.

(2)

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7 Work out 3^2 - (the cube root of 125) x 5.

(3)

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8 Work out (1 - (-6)) x 7.

(2)

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9 Work out (3 + 6) x 2.

(2)

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10 Work out $8^2 - 4^2$.

(2)

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11 Work out -9 x 4 + 2 x (-8).

(3)

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12 Work out 7 + 3 x 2.

(2)

13 Work out 4^2 + 8 x 3.

(3)

14 Work out (5 - (-6)) x 2.

(2)

15 Work out 18 - (3 - 3) x 5.

(3)

16 Work out $3^2 + 3^4$.

(2)

17 Work out 5 + 6 x 2.

(2)

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18 Work out (-9 - (-6)) x 8.

(2)

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19 Work out -5 x 6 + 8 x (-2).

(3)

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20 Use a calculator to work out (5.1 + 9.4) ÷ (6.6 x 4.2).
Give your answer correct to 2 decimal places.

(2)

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21 A student writes 12 - 4 x 2 = (12 - 4) x 2. Explain the mistake and give the correct answer.

(2)

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Mark scheme · 1.8 Order of Operations and Calculator Methods: 1-hour Pack

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

Question 1

2 - (-5) = 7	M1
56 cao	A1

Answer: **56**

Question 2

6 cao	B1

Answer: **6**

Question 3

6 x 4 = 24 evaluated	M1
8 x (-8) = -64 evaluated	M1
-40 cao	A1

Answer: **-40**

Question 4

correct first operation applied by the order of operations (brackets, indices, then x and ÷)	M1
second correct stage of working	M1
-5 cao	A1

Answer: **-5**

Question 5

3 cao	B1

Answer: **3**

Question 6

2 - (-7) = 9	M1
36 cao	A1

Answer: **36**

Question 7

9 found	M1
5 x 5 = 25 found	M1
-16 cao	A1

Answer: **-16**

Question 8

1 - (-6) = 7	M1
49 cao	A1

Answer: **49**

Question 9

correct first operation applied by the order of operations (brackets, indices, then x and ÷)	M1
18 cao	A1

Answer: **18**

Question 10

$8^2 = 64$ or $4^2 = 16$ found	M1
48 cao	A1

Answer: **48**

Question 11

-9 x 4 = -36 evaluated	M1
2 x (-8) = -16 evaluated	M1
-52 cao	A1

Answer: **-52**

Question 12

correct first operation applied by the order of operations (brackets, indices, then x and ÷)	M1
13 cao	A1

Answer: **13**

Question 13

correct first operation applied by the order of operations (brackets, indices, then x and ÷)	M1
second correct stage of working	M1
40 cao	A1

Answer: **40**

Question 14

5 - (-6) = 11	M1
22 cao	A1

Answer: **22**

Question 15

correct first operation applied by the order of operations (brackets, indices, then x and ÷)	M1
second correct stage of working	M1
18 cao	A1

Answer: **18**

Question 16

$3^2 = 9$ or $3^4 = 81$ found	M1
90 cao	A1

Answer: **90**

Question 17

correct first operation applied by the order of operations (brackets, indices, then x and ÷)	M1
17 cao	A1

Answer: **17**

Question 18

-9 - (-6) = -3	M1
-24 cao	A1

Answer: **-24**

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Question 19

-5 x 6 = -30 evaluated	**M1**
8 x (-2) = -16 evaluated	**M1**
-46 cao	**A1**

Answer: **-46**

Question 20

correct use of brackets and order of operations (method shown or unrounded value seen)	**M1**
0.52 cao	**A1**

Answer: **0.52**

Question 21

identifies that multiplication must be done before subtraction (BIDMAS), not left to right	**B1**
4 cao	**B1**

Answer: **4**

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