FOUNDATION

1.10D BIDMAS: Fluency and Exam Drill

Total Marks

EDEXCEL Edexcel 1MA1 · Calculator allowed · about 40 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Work out $7 + 3 \times 5$.

(Total for Question 1 is 1 mark)

2 Work out $(8 + 2) \times 4$.

(Total for Question 2 is 1 mark)

3 Work out $18 / 3 + 2$.

(Total for Question 3 is 1 mark)

4 Work out $2^3 \times 5$.

(Total for Question 4 is 1 mark)

5 Work out $5 + (6 - 2)^2$.

(Total for Question 5 is 2 marks)

6 Work out 12 / (2 + 1) + 7.

(Total for Question 6 is 2 marks)

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7 Work out $3 + 4 \times 2^2$.

(Total for Question 7 is 2 marks)

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8 Work out (9 - 3) x (2 + 5).

(Total for Question 8 is 2 marks)

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9 Work out $18 - 2^3 \times 2 + 5$.

(Total for Question 9 is 3 marks)

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10 Work out $(5 + 3)^2 - 4 \times (6 - 3)$.

(Total for Question 10 is 3 marks)

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11 Work out 6 / 2 x (1 + 2).

(Total for Question 11 is 3 marks)

12 Work out $8 - 3 \times 2^2 + (6 / 3)$.

(Total for Question 12 is 4 marks)

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13 Show that $(4 + 2^3) / (3 - 1) = 6$.

(Total for Question 13 is 4 marks)

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14 Priya calculates $(7 + 2) \times 3^2$ incorrectly as $7 + 2 \times 3^2$.
Work out Priya's answer and the correct answer. Find the difference between the two answers.

(Total for Question 14 is 3 marks)

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15 Evaluate $2^4 - (5 + 3) \times 2$.

(Total for Question 15 is 3 marks)

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16 Work out $(15 - 7) / 4 + 2$.

(Total for Question 16 is 2 marks)

17 Work out $3 + (12 - 4) / 2^2$.

(Total for Question 17 is 3 marks)

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18 Work out $(2 + (3^2 - 1)) \times (5 - 3) + 2^3$.

(Total for Question 18 is 4 marks)

Mark scheme · 1.10D BIDMAS: Fluency and Exam Drill

Question 1

- **B1** 22 cao
- **Answer: 22**

Question 2

- **B1** 40 cao
- **Answer: 40**

Question 3

- **B1** 8 cao
- **Answer: 8**

Question 4

- **B1** 40 cao
- **Answer: 40**

Question 5

- **M1** evaluate $(6 - 2)^2$ or show $(6 - 2) = 4$ and $4^2 = 16$
- **A1** 21 cao
- **Answer: 21**

Question 6

- **M1** evaluate denominator $2 + 1 = 3$ and divide 12 by 3
- **A1** 11 cao
- **Answer: 11**

Question 7

- **M1** evaluate $2^2 = 4$ and then $4 \times 4 = 16$ or show the multiplication
- **A1** 19 cao
- **Answer: 19**

Question 8

- **M1** evaluate each bracket, $(9 - 3) = 6$ and $(2 + 5) = 7$
- **A1** 42 cao
- **Answer: 42**

Question 9

- **M1** evaluate $2^3 = 8$
- **M1** multiply $8 \times 2 = 16$ or show $2^3 \times 2 = 16$
- **A1** 7 cao
- **Answer: 7**

Question 10

- **M1** evaluate $(5 + 3)^2 = 8^2 = 64$ or show correct squaring
- **M1** evaluate $(6 - 3) = 3$ and $4 \times 3 = 12$
- **A1** 52 cao
- **Answer: 52**

Question 11

- **M1** evaluate bracket 1 + 2 = 3
- **M1** do division before multiplication left to right: 6 / 2 = 3 then 3 x 3
- **A1** 9 cao
- **Answer: 9**

Question 12

- **M1** evaluate index $2^2 = 4$
- **M1** multiply 3 x 4 = 12
- **M1** evaluate 6 / 3 = 2
- **A1** -2 cao
- **Answer: -2**

Question 13

- **M1** evaluate $2^3 = 8$
- **M1** add 4 + 8 = 12 (numerator)
- **M1** evaluate denominator 3 - 1 = 2
- **A1** 6 cso
- **Answer: 6**

Question 14

- **M1** show Priya's method $7 + (2 \times 3^2)$ and evaluate to 25
- **M1** show correct method $(7 + 2) \times 3^2$ and evaluate to 81
- **A1** difference 56 cao
- **Answer: Priya's answer 25; correct answer 81; difference 56**

Question 15

- **M1** evaluate $2^4 = 16$
- **M1** evaluate (5 + 3) x 2 = 8 x 2 = 16
- **A1** 0 cao
- **Answer: 0**

Question 16

- **M1** evaluate bracket and division: (15 - 7) = 8, 8 / 4 = 2
- **A1** 4 cao
- **Answer: 4**

Question 17

- **M1** evaluate numerator 12 - 4 = 8
- **M1** evaluate denominator $2^2 = 4$ and divide 8 / 4 = 2
- **A1** 5 cao
- **Answer: 5**

Question 18

- **M1** evaluate $3^2 = 9$
- **M1** evaluate 9 - 1 = 8 and 2 + 8 = 10
- **M1** evaluate (5 - 3) = 2 and multiply 10 x 2 = 20
- **A1** 28 cao
- **Answer: 28**