2.5 Fractions, Decimals and Percentages: Test Pack

EDEXCEL 1MA1 · Calculator allowed · about 60 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Write these decimals in order of size, starting with the smallest.

0.6 0.06 0.66

(Total for Question 1 is 1 mark)

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2 Which of these is equivalent to 3/4?

- ☐ A) 0.75
- ☐ B) 75
- ☐ C) 0.34
- ☐ D) 34%

(Total for Question 2 is 1 mark)

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3 Simplify 6/9 fully.

(Total for Question 3 is 1 mark)

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4 Write 0.6 as a fraction in its simplest form.

(Total for Question 4 is 1 mark)

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5 Write 7/20 as a decimal.

(Total for Question 5 is 1 mark)

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6 Three of these four values are equal to each other. Write down the value that is not equal to the other three: 3/4, 75%, 0.75, 0.7

(Total for Question 6 is 1 mark)

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7 Work out 3/8 of 240.

(Total for Question 7 is 2 marks)

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8 Aisha says that 3/5 is bigger than 55%.

Is Aisha correct? Show working to justify your answer.

(Total for Question 8 is 2 marks)

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9 Write these numbers in order of size, starting with the smallest: 3/4, 0.73, 66%

(Total for Question 9 is 3 marks)

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10 In Test A, Dev scored 18 out of 20. In Test B, Dev scored 21 out of 40. In which test did Dev do better? Show your working.

(Total for Question 10 is 3 marks)

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11 Write the fraction 1/5 as (a) a decimal, (b) a percentage.

(Total for Question 11 is 2 marks)

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12 Write these numbers in order of size, starting with the smallest: 9/25, 0.41, 45%

(Total for Question 12 is 3 marks)

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13 Write these fractions in order of size, starting with the smallest.

3/4 1/8 1/2 1/4

(Total for Question 13 is 2 marks)

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14 Write 5/8 as a percentage.

(Total for Question 14 is 1 mark)

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15 Write 3.2 as a percentage.

(Total for Question 15 is 1 mark)

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16 Work out 1/3 + 1/4. Give your answer as a single fraction in its simplest form.

(Total for Question 16 is 3 marks)

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17 Express 24 as a percentage of 80.

(Total for Question 17 is 2 marks)

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18 The table shows the proportion of pupils who achieved a merit in four classes.

Class A: 0.62

Class B: 59%

Class C: 5/8

Class D: 3/5

Order the classes from lowest to highest proportion of merits.

(Total for Question 18 is 2 marks)

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19 A student was asked to write 0.35 as a fraction in its simplest form.

Here is their working: 0.35 = 35/100 = 3/10

Explain the mistake in the student's working, and write down the correct answer.

(Total for Question 19 is 3 marks)

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20 Show that 0.272727... = 3/11. You must show the working.

(Total for Question 20 is 2 marks)

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21 After a 20% increase, the price of a games console is £276. Work out the price before the increase.

(Total for Question 21 is 3 marks)

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22 A quantity is increased by 12% and then decreased by 12%. Work out the overall percentage change (state decrease or increase).

(Total for Question 22 is 3 marks)

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Mark scheme · 2.5 Fractions, Decimals and Percentages: Test Pack

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

Question 1

0.06, 0.6, 0.66 in this order oe **B1**

Answer: 0.06, 0.6, 0.66

Question 2

A cao **B1**

Answer: A (0.75)

Question 3

2/3 cao **B1**

Answer: 2/3

Question 4

3/5 cao **B1**

Answer: 3/5

Question 5

0.35 cao **B1**

Answer: 0.35

Question 6

0.7 cao **B1**

Answer: 0.7

Question 7

240 divided by 8 (=30) oe **M1**

90 cao **A1**

Answer: 90

Question 8

3/5 converted to 60% oe (or 55% converted to 11/20) **M1**

correct conclusion that Aisha is correct, since 60% > 55% ft **A1**

Answer: Yes, Aisha is correct: 3/5 = 60%, and 60% is greater than 55%.

Question 9

converts to a common form, fraction, decimal or percentage **M1**

all three correctly converted **M1**

66%, 0.73, 3/4 cao **A1**

Answer: 66%, 0.73, 3/4

Question 10

18/20 or 21/40 converted to a percentage, decimal or common fraction **M1**

90% and 52.5% **A1**

Test A **B1**

Answer: Test A

Question 11

0.2 cao **B1**

20% cao **B1**

Answer: (a) 0.2, (b) 20%

Question 12

converts to a common form, fraction, decimal or percentage **M1**

all three correctly converted **M1**

9/25, 0.41, 45% cao **A1**

Answer: 9/25, 0.41, 45%

Question 13

evidence of converting to a common denominator, e.g. 6/8, 1/8, 4/8, 2/8 **M1**

1/8, 1/4, 1/2, 3/4 cao (correct order) **A1**

Answer: 1/8, 1/4, 1/2, 3/4

Question 14

62.5% cao **B1**

Answer: 62.5%

Question 15

320% cao **B1**

Answer: 320%

Question 16

common denominator of 12 identified oe **M1**

4/12 + 3/12 oe seen **M1**

7/12 cao (already in simplest form) **A1**

Answer: 7/12

Question 17

24/80 written or 24 divided by 80 (=0.3) oe **M1**

30% cao **A1**

Answer: 30%

Question 18

convert to a common form or compare: Class A = 0.62, Class B = 0.59, Class C = 0.625, Class D = 0.6 **M1**

Class B, Class D, Class A, Class C cao **A1**

Answer: Class B, Class D, Class A, Class C

Question 19

identifies that 35/100 was simplified using the wrong common factor (e.g. divided by 10 instead of the highest common factor, 5) oe **M1**

correct method: divide both 35 and 100 by 5 to get 7/20 **M1**

7/20 cao **A1**

Answer: The student divided by 10 instead of the highest common factor, 5. The correct answer is 7/20.

Question 20

method: let x = 0.272727..., 100x - x = 27.2727... - 0.2727... = 27 **M1**

3/11 cso **A1**

Answer: 3/11

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Question 21

use equation 1.20 x original = 276, or recognise original = 276 / 1.20	**M1**
perform division 276 / 1.20 = 230	**M1**
£230 cao	**A1**

Answer: £230

Question 22

use multiplicative factors 1.12 and 0.88 and multiply	**M1**
evaluate 1.12 x 0.88 = 0.9856	**M1**
final change is a decrease of 1.44% (0.9856 = 98.56% so decrease 1.44%)	**A1**

Answer: Decrease of 1.44%

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