2.4 Decimals: Test Pack

GL ASSESSMENT GL-11PLUS-MATHS · Calculators not allowed · about 45 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Each number below contains the digit 6. Write down the value of the digit 6 in each number.

(a) 3.6 **(1)**

(b) 5.26 **(1)**

(c) 7.406 **(1)**

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2 Work out 6.9 x 6.

- ☐ A) 40.4
- ☐ B) 414
- ☐ C) 12.9
- ☐ D) 4.14
- ☐ E) 41.4

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3 Work out 2.87 + 2.2.

- ☐ A) 6.07
- ☐ B) 0.67
- ☐ C) 4.07
- ☐ D) 3.09
- ☐ E) 5.07

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4 Work out 16.41 - 5.81.

- ☐ A) 10.6
- ☐ B) 15.829
- ☐ C) 9.6
- ☐ D) 22.22
- ☐ E) 106

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5 Work out 1.35 / 0.09.

- ☐ A) 15
- ☐ B) 1.5
- ☐ C) 1,500
- ☐ D) 14
- ☐ E) 150

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6 Write these numbers in order of size, starting with the smallest: 0.5, 0.45, 0.505, 0.454

(2)

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7 Work out 19.34 - 7.39.

- ☐ A) 10.95
- ☐ B) 11.95
- ☐ C) 119.5
- ☐ D) 26.73
- ☐ E) 18.601

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8 Work out 0.47 x 8.2.

- ☐ A) 0.3854
- ☐ B) 0.03854
- ☐ C) 2.854
- ☐ D) 3.854
- ☐ E) 38.54

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9 Work out 4 / 2.

- ☐ A) 0.2
- ☐ B) 200
- ☐ C) 2
- ☐ D) 20
- ☐ E) 1

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10 Work out 95.64 + 9.06.

- ☐ A) 96.546
- ☐ B) 104.8
- ☐ C) 104.7
- ☐ D) 86.58
- ☐ E) 105.7

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11 The number 5.867 is to be rounded.

(a) Round 5.867 to 1 decimal place. **(1)**

(b) Round 5.867 to the nearest whole number. **(1)**

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12 Work out 56.3 divided by each of the following.

(a) 56.3 / 10 **(1)**

.....

(b) 56.3 / 100 **(1)**

.....

(c) 56.3 / 1000 **(1)**

.....

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13 Work out each of the following, without using a calculator.

(a) 8.4 / 4 **(1)**

(b) 12.6 / 6 **(1)**

(c) 0.72 / 8 **(1)**

14 Convert each fraction to a decimal.

(a) 3/4 **(1)**

(b) 7/20 **(1)**

(c) 9/25 **(1)**

15 Convert each decimal to a fraction in its simplest form.

(a) 0.35 **(1)**

(b) 0.125 **(1)**

(c) 0.6 **(1)**

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16 Work out the value of each expression, following the correct order of operations.

(a) 3.6 + 2.4 x 0.5 **(2)**

(b) (3.6 - 1.2) / 4 **(2)**

17 This question is about the decimal 0.375.

(a) Show that 0.375 is equivalent to 3/8. **(2)**

(b) Hence write 5.375 as a mixed number in its simplest form. **(2)**

18 A recipe needs 0.35 kg of flour, 0.125 kg of sugar and 0.6 kg of butter. Grace has a 1 kg bag of flour, a 0.5 kg bag of sugar and a 1 kg block of butter.

(a) Calculate the total mass of flour, sugar and butter needed for the recipe. **(2)**

(b) State, with a reason, whether Grace has enough of all three ingredients. **(2)**

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19 In the calculation 4.n8 x 2 = 9.76, the letter n represents a single missing digit. Find the value of n, showing your working.

(4)

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20 Without using a calculator, work out which is greater, 0.6 x 0.6 or 0.6 + 0.6, and give a reason for your answer.

(4)

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Mark scheme · 2.4 Decimals: Test Pack

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

Question 1

(a) 0.6 oe six tenths **B1**

(a) Answer: 0.6

(b) 0.06 oe six hundredths **B1**

(b) Answer: 0.06

(c) 0.006 oe six thousandths **B1**

(c) Answer: 0.006

Question 2

correct option E (41.4) cao **B1**

Answer: E) 41.4

Question 3

correct option E (5.07) cao **B1**

Answer: E) 5.07

Question 4

correct option A (10.6) cao **B1**

Answer: A) 10.6

Question 5

correct option A (15) cao **B1**

Answer: A) 15

Question 6

all four numbers written to the same number of decimal places for comparison, e.g. 0.450, 0.454, 0.500, 0.505 **M1**

0.45, 0.454, 0.5, 0.505 cao **A1**

Answer: 0.45, 0.454, 0.5, 0.505

Question 7

correct option B (11.95) cao **B1**

Answer: B) 11.95

Question 8

correct option D (3.854) cao **B1**

Answer: D) 3.854

Question 9

correct option C (2) cao **B1**

Answer: C) 2

Question 10

correct option C (104.7) cao **B1**

Answer: C) 104.7

Question 11

(a) 5.9 cao **B1**

(a) Answer: 5.9

(b) 6 cao **B1**

(b) Answer: 6

Question 12

(a) 5.63 cao **B1**

(a) Answer: 5.63

(b) 0.563 cao **B1**

(b) Answer: 0.563

(c) 0.0563 cao **B1**

(c) Answer: 0.0563

Question 13

(a) 2.1 cao **B1**

(a) Answer: 2.1

(b) 2.1 cao **B1**

(b) Answer: 2.1

(c) 0.09 cao **B1**

(c) Answer: 0.09

Question 14

(a) 0.75 cao **B1**

(a) Answer: 0.75

(b) 0.35 cao **B1**

(b) Answer: 0.35

(c) 0.36 cao **B1**

(c) Answer: 0.36

Question 15

(a) 7/20 cao **B1**

(a) Answer: 7/20

(b) 1/8 cao **B1**

(b) Answer: 1/8

(c) 3/5 cao **B1**

(c) Answer: 3/5

Question 16

(a) 2.4 x 0.5 = 1.2 evaluated first **M1**

(a) 4.8 cao **A1**

(a) Answer: 4.8

(b) 3.6 - 1.2 = 2.4 evaluated first **M1**

(b) 0.6 cao **A1**

(b) Answer: 0.6

Question 17

(a) 0.375 written as 375/1000 oe **M1**

(a) correctly simplified to 3/8 cso, answer given so working must be shown **A1**

(a) Answer: 3/8 (shown)

(b) 5.375 split as 5 + 0.375, ft from part (a) **M1**

(b) 5 3/8 cao **A1**

(b) Answer: 5 3/8

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Question 18

(a) 0.35 + 0.125 + 0.6 seen, or a correct part sum	**M1**
(a) 1.075 kg cao	**A1**

(a) Answer: 1.075 kg

(b) correct conclusion: yes, she has enough of all three ingredients	**B1**
(b) valid supporting reason comparing each amount needed with the amount available, e.g. 0.35 < 1, 0.125 < 0.5 and 0.6 < 1	**B1**

(b) Answer: Yes, she has enough of all three ingredients

Question 19

9.76 / 2 seen	**M1**
4.88 found	**A1**
4.88 compared digit by digit with 4.n8 to identify the tenths digit	**M1**
n = 8 cao	**A1**

Answer: n = 8

Question 20

0.6 x 0.6 = 0.36 evaluated correctly	**M1**
0.6 + 0.6 = 1.2 evaluated correctly	**M1**
correct conclusion that 0.6 + 0.6 is greater	**A1**
valid general reason, e.g. multiplying two positive decimals that are each less than 1 gives an answer smaller than either number, whereas adding two positive numbers always gives a larger result, ft from the two calculated values	**B1**

Answer: 0.6 + 0.6 = 1.2 is greater than 0.6 x 0.6 = 0.36

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