4.4 Fractions, Decimals and Percentages Depth: Test Pack

NCETM National Curriculum (2014) Mathematics - KS2 Fractions, Decimals and Percentages (Depth) · Calculators not allowed · about 60 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Complete each equivalent fraction statement.

(a) 2/3 = ?/12 **(1)**

(b) 5/6 = 20/? **(1)**

(c) 7/9 = ?/45 **(1)**

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2 Write each fraction in its simplest form.

(a) 12/18 **(1)**

(b) 24/32 **(1)**

(c) 35/50 **(1)**

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3 Aaliyah and Tomasz are saving for a games console that costs £180. Aaliyah has saved 3/5 of the cost. Tomasz has saved 70% of the cost. Work out how much more Tomasz has saved than Aaliyah.

(4)

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4 Write these decimals in order, starting with the smallest.

0.765, 0.264, 0.363, 0.385

Answer: ___

(1)

---

5 Write <, > or = in the box.

3/4 [ ] 8/9

Answer: ___

(2)

---

6 A plank is 6.5 metres. How many metres are there in 5 planks?

Answer: ___ metres

(2)

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7 Decrease £28 by 75%.

Answer: ___

(2)

---

8 A bag weighs 2.1 kg. How many kg are there in 6 bags?

Answer: ___ kg

(2)

---

9 A coat normally costs £84. In a sale it is reduced by 25%. What is the sale price of the coat?

(3)

---

10 In a sale, a book costs £25. The price is reduced by 50%.

What is the sale price?

Answer: £___

(3)

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11 1/2 = ___/8

Answer: ___

(1)

---

12 Convert each decimal to a percentage, and each percentage to a decimal.

(a) Write 0.62 as a percentage. **(1)**

(b) Write 0.07 as a percentage. **(1)**

(c) Write 135% as a decimal. **(1)**

---

13 Write these decimals in order, starting with the smallest.

1.871, 0.964, 1.249, 1.745

Answer: ___

(1)

---

14 Write these four values in order, starting with the smallest: 3/5, 0.55, 62%, 3/8

(2)

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15 In a sale, a ruler set costs £115. The price is reduced by 20%.

What is the sale price?

Answer: £___

(2)

---

16 Work out 3/4 + 5/6. Give your answer as a mixed number in its simplest form.

(2)

---

17 A plank is 8.2 metres. How many metres are there in 3 planks?

Answer: ___ metres

(2)

---

18 Write 7/50 as a percentage.

Answer: ___ %

(2)

---

19 Round 44.185 to the nearest whole number.

Answer: ___

(1)

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20 2/5 = ___/10

Answer: ___

(1)

---

21 1/3 = ___/18

Answer: ___

(1)

---

22 Which fraction is equivalent to 1/8?

A: 4/24 B: 4/11 C: 3/25 D: 3/24

Write the letter.

Answer: ___

(1)

---

23 Work out 20% of £12.

Answer: ___

(1)

---

24 3/6 x 2/5 =

Answer: ___

(1)

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Mark scheme · 4.4 Fractions, Decimals and Percentages Depth: Test Pack

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

Question 1

(a) 8 cao	B1
(a) Answer: **8**	
(b) 24 cao	B1
(b) Answer: **24**	
(c) 35 cao	B1
(c) Answer: **35**	

Question 2

(a) 2/3 cao	B1
(a) Answer: **2/3**	
(b) 3/4 cao	B1
(b) Answer: **3/4**	
(c) 7/10 cao	B1
(c) Answer: **7/10**	

Question 3

3/5 of 180 = 108 found oe	M1
70% of 180 = 126 found oe	M1
126 - 108 set up, dependent on both previous method marks	dM1
£18 cao	A1
Answer: **£18**	

Question 4

0.264, 0.363, 0.385, 0.765 cao	B1
Answer: **0.264, 0.363, 0.385, 0.765**	

Question 5

common denominator seen	M1
< cao	A1
Answer: **<**	

Question 6

multiplication seen	M1
32.5 metres cao	A1
Answer: **32.5 metres**	

Question 7

percentage found	M1
£7 cao	A1
Answer: **£7**	

Question 8

multiplication seen	M1
12.6 kg cao	A1
Answer: **12.6 kg**	

Question 9

25% of 84 found, e.g. 84 / 4 = 21 oe	M1
84 - 21 set up, dependent on the previous method mark	dM1
£63 cao	A1
Answer: **£63**	

Question 10

reduction found	M1
subtracts from the original price	M1
£12.50 cao	A1
Answer: **£12.50**	

Question 11

4 cao	B1
Answer: **4**	

Question 12

(a) 62% cao	B1
(a) Answer: **62%**	
(b) 7% cao	B1
(b) Answer: **7%**	
(c) 1.35 cao	B1
(c) Answer: **1.35**	

Question 13

0.964, 1.249, 1.745, 1.871 cao	B1
Answer: **0.964, 1.249, 1.745, 1.871**	

Question 14

at least three of the four values correctly converted to a common form, e.g. 3/5 = 0.6, 62% = 0.62, 3/8 = 0.375 oe	M1
3/8, 0.55, 3/5, 62% cao (fully correct order)	A1
Answer: **3/8, 0.55, 3/5, 62%**	

Question 15

reduction found	M1
£92 cao	A1
Answer: **£92**	

Question 16

common denominator of 12 used, e.g. 9/12 + 10/12 oe	M1
1 7/12 cao	A1
Answer: **1 7/12**	

Question 17

multiplication seen	M1
24.6 metres cao	A1
Answer: **24.6 metres**	

Question 18

method seen	M1
14% cao	A1
Answer: **14%**	

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Question 19

44 cao **B1**

Answer: **44**

Question 20

4 cao **B1**

Answer: **4**

Question 21

6 cao **B1**

Answer: **6**

Question 22

D cao **B1**

Answer: **D**

Question 23

£2.40 cao **B1**

Answer: **£2.40**

Question 24

1/5 cao **B1**

Answer: **1/5**

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