1.6 Reasoning and Problem Solving (Year 3): Test Pack

Total Marks

Calculators not allowed · about 60 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Write the answer to 145 + 27.

(1)

2 A zoo had 776 visitors on Saturday and 865 visitors on Sunday.

How many more visitors came on the busier day?

Answer: ___

(2)

3 Each tray has 35 spaces. There are 345 cakes to carry.

What is the smallest number of trays needed?

Answer: ___

(2)

4 Here are two numbers: 204 and 240. Explain which number is greater and say why using place value language.

(2)

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5 Zara buys a bag of potatoes weighing 4.7 kg and a bag of carrots weighing 323 g.

What is the total mass in kg?

Answer: ___ kg

(2)

---

6 Work out 2/4 of 32 cm.

Answer: ___

(1)

---

7 Daisy has 9 more marbles than Hassan. Together they have 51 marbles.

How many marbles does Hassan have?

Answer: ___

(2)

---

8 A bottle holds 1 litre of water. How many millilitres are in 1 litre and 250 millilitres?

(2)

---

9 Write the answer to 302 - 89.

(1)

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10 In a class of 24 pupils, 9 like tea, 18 like coffee and 5 like both.

How many pupils like neither?

Answer: ___

(2)

---

11 Mateo has 5 boxes with 319 stickers in each box and 549 loose stickers.

How many stickers does Mateo have altogether?

Answer: ___

(2)

---

12 Yusuf eats 2/4 of a pie on Monday and 1/4 on Tuesday.

What fraction of the pie is left? Give your answer in its simplest form.

Answer: ___

(2)

---

13 Poppy has 128 toy cars. Poppy gives 4/8 of them to a friend.

How many toy cars does Poppy give to the friend?

Answer: ___

(2)

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14 Complete the missing number: 70 - ? = 28

(1)

---

15 In a class of 30 pupils, 8 like cheese, 25 like ham and 4 like both.

How many pupils like neither?

Answer: ___

(2)

---

16 Daisy buys 8 packs of magnets. Each pack has 7 magnets. How many magnets does Daisy have?

Answer: ___

(1)

---

17 Hana has 6 boxes with 136 marbles in each box and 411 loose marbles.

How many marbles does Hana have altogether?

Answer: ___

(2)

---

18 There are 3 rows of chairs with 9 chairs in each row. How many chairs are there?

Answer: ___

(1)

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19 Work out 5/6 of 18 cm.

Answer: ___

(1)

---

20 Ivan buys 5 magnets at £1.41 each and 1 poster at 84p each. Ivan pays with £10.

How much change does Ivan get?

Answer: £___

(2)

---

21 Reece eats 6/12 of a pie on Monday and 2/12 on Tuesday.

What fraction of the pie is left? Give your answer in its simplest form.

Answer: ___

(2)

---

22 Each box has 31 spaces. There are 75 eggs to carry.

What is the smallest number of boxes needed?

Answer: ___

(2)

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23 What is 1/4 of 28?

(1)

---

24 A jug holds 2.5 litres of juice. Ella pours it into glasses that each hold 125 ml.

How many glasses can be filled?

Answer: ___

(2)

---

25 In a class of 37 pupils, 14 like football, 12 like netball and 2 like both.

How many pupils like neither?

Answer: ___

(2)

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26 A ribbon is 8 m long. Freya cuts it into pieces that are each 50 cm long.

How many pieces does Freya cut?

Answer: ___

(2)

---

27 A festival had 927 visitors on Saturday and 499 visitors on Sunday.

How many more visitors came on the busier day?

Answer: ___

(2)

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Mark scheme · 1.6 Reasoning and Problem Solving (Year 3): Test Pack

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

Question 1

172 cao	B1

Answer: **172**

Question 2

subtraction method seen	M1
89 cao	A1

Answer: **89**

Question 3

345 / 35 = 9 remainder 30 seen	M1
10 cao	A1

Answer: **10**

Question 4

Mention of hundreds, tens or ones to compare, e.g. both have 2 hundreds but 240 has more tens	M1
Correct conclusion that 240 is greater (240 > 204) cao	B1

Answer: **240**

Question 5

323 g = 0.323 kg seen	M1
5.023 kg cao	A1

Answer: **5.023 kg**

Question 6

16 cm cao	B1

Answer: **16 cm**

Question 7

51 - 9 = 42 seen	M1
21 cao	A1

Answer: **21**

Question 8

Correct conversion of 1 litre to 1000 ml and addition shown	M1
1250 ml cao	B1

Answer: **1250 ml**

Question 9

213 cao	B1

Answer: **213**

Question 10

9 + 18 - 5 = 22 seen	M1
2 cao	A1

Answer: **2**

Question 11

5 x 319 = 1,595 seen	M1
2,144 cao	A1

Answer: **2,144**

Question 12

3/4 eaten seen	M1
1/4 cao	A1

Answer: **1/4**

Question 13

128 divided by 8 = 16 seen	M1
64 cao	A1

Answer: **64**

Question 14

42 cao	B1

Answer: **42**

Question 15

8 + 25 - 4 = 29 seen	M1
1 cao	A1

Answer: **1**

Question 16

56 cao	B1

Answer: **56**

Question 17

6 x 136 = 816 seen	M1
1,227 cao	A1

Answer: **1,227**

Question 18

27 cao	B1

Answer: **27**

Question 19

15 cm cao	B1

Answer: **15 cm**

Question 20

7.05 seen	M1
£2.11 cao	A1

Answer: **£2.11**

Question 21

8/12 eaten seen	M1
1/3 cao	A1

Answer: **1/3**

Question 22

75 / 31 = 2 remainder 13 seen	M1
3 cao	A1

Answer: **3**

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Question 23

7 cao	**B1**

Answer: **7**

Question 24

2.5 litres = 2,500 ml seen	**M1**
20 cao	**A1**

Answer: **20**

Question 25

14 + 12 - 2 = 24 seen	**M1**
13 cao	**A1**

Answer: **13**

Question 26

8 m = 800 cm seen	**M1**
16 cao	**A1**

Answer: **16**

Question 27

subtraction method seen	**M1**
428 cao	**A1**

Answer: **428**

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