# 5.1 Reasoning: Ratio and Proportion: 30-minute Pack

STA KS2 National Curriculum Mathematics - STA Reasoning Test Framework · Calculators not allowed · about 30 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

**Answer ALL questions. Show all your working.**

**1** Rhys measures out 750ml of orange squash concentrate and 2 litres of water. Write the ratio of concentrate to water in its simplest form.

**(2)**

**2** Write the ratio 27:15 in its simplest form.

Answer: ___

**(2)**

**3** A recipe for muffins for 8 people uses 250 g of sugar.

How much sugar is needed for 32 people?

Answer: ___ g

**(2)**


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**4** 5 notebooks cost 350p.

How much do 10 notebooks cost? Give your answer in pounds.

Answer: £___

**(2)**

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**5** 6 postcards cost 84p.

How much do 4 postcards cost? Give your answer in pounds.

Answer: £___

**(2)**

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**6** In a sale, a football costs £135. The price is reduced by 30%.

What is the sale price?

Answer: £___

**(2)**

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**7** £1 = 6 francs.

A toy costs 132 francs. How much is that in pounds?

Answer: £___

**(1)**


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**8** £1 = 3 francs.

A toy costs 45 francs. How much is that in pounds?

Answer: £___

**(1)**

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**9** Grace and Poppy share some money in the ratio 2:5. The difference between their shares is £30.

How much money is shared altogether?

Answer: £___

**(2)**

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**10** In Ben's school choir, the ratio of boys to girls is 3:7. There are 12 boys in the choir. How many children are in the choir altogether?

**(2)**

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**11** Marcus scored 18 out of 24 in a spelling test. Write his score as a fraction in its simplest form, then write it as a percentage.

**(2)**


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**12** A shop sells 6 cereal packs for £2.37 and 4 cereal packs for £1.42.

Which option costs less for each pack? Write 6 or 4 for the number of packs.

Answer: ___

**(2)**

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**13** Priya and Jack share 45 sweets in the ratio 4:5. How many sweets does Jack get?

**(2)**


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# Mark scheme · 5.1 Reasoning: Ratio and Proportion: 30-minute Pack

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

## Question 1

| | |
|---|---|
| converts 2 litres to 2000ml oe | M1 |
| 3:8 oe cao (simplest form) | A1 |

Answer: **3:8**

## Question 2

| | |
|---|---|
| divides both by a common factor | M1 |
| 9:5 cao | A1 |

Answer: **9:5**

## Question 3

| | |
|---|---|
| finds the amount for 1 person or a scale factor | M1 |
| 1,000 g cao | A1 |

Answer: **1,000 g**

## Question 4

| | |
|---|---|
| 350 divided by 5 = 70 seen | M1 |
| £7 cao | A1 |

Answer: **£7**

## Question 5

| | |
|---|---|
| 84 divided by 6 = 14 seen | M1 |
| £0.56 cao | A1 |

Answer: **£0.56**

## Question 6

| | |
|---|---|
| reduction found | M1 |
| £94.50 cao | A1 |

Answer: **£94.50**

## Question 7

| | |
|---|---|
| £22 cao | B1 |

Answer: **£22**

## Question 8

| | |
|---|---|
| £15 cao | B1 |

Answer: **£15**

## Question 9

| | |
|---|---|
| 3 parts = £30 so 1 part = £10 seen | M1 |
| £70 cao | A1 |

Answer: **£70**

## Question 10

| | |
|---|---|
| scale factor = 12 / 3 = 4, so girls = 7 x 4 = 28 oe | M1 |
| 40 cao | A1 |

Answer: **40 children**

## Question 11

| | |
|---|---|
| 3/4 oe | A1 |
| 75% cao | A1 |

Answer: **3/4 = 75%**

## Question 12

| | |
|---|---|
| works out a cost per pack for each option | M1 |
| 4 cao | A1 |

Answer: **4**

## Question 13

| | |
|---|---|
| 45 / 9 = 5 (value of one part) oe | M1 |
| 25 cao | A1 |

Answer: **25 sweets**


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