5.1 Reasoning: Ratio and Proportion: 10-minute Pack

STA KS2 National Curriculum Mathematics - STA Reasoning Test Framework · Calculators not allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Chidi is making a necklace using red beads and blue beads in the ratio 2:3. He uses 10 red beads. How many blue beads does he need?

(2)

2 Two numbers are in the ratio 5:8. The smaller number can be written as 5n and the larger number as 8n, where n is a whole number. When the smaller number is increased by 12 and the larger number is decreased by 3, the two new numbers are equal. Form an equation and solve it to find the two original numbers.

(4)

3 Aisha is comparing two packs of pens. A pack of 6 pens costs £2.70. A pack of 10 pens of the same type costs £4.20. Which pack is better value, and by how much is the price per pen cheaper for that pack compared with the other pack?

(3)

© Revision Library | revisionlibrary.co.uk

Mark scheme · 5.1 Reasoning: Ratio and Proportion: 10-minute Pack

Question 1

10 / 2 = 5 (finds the scale factor) oe	**M1**
15 cao	**A1**

Answer: **15 blue beads**

Question 2

forms equation 5n + 12 = 8n - 3 oe	**M1**
solves to n = 5 oe	**M1**
smaller number = 25 cao	**A1**
larger number = 40 cao	**A1**

Answer: **25 and 40**

Question 3

unit price of pack of 6 = 270p / 6 = 45p per pen oe	**M1**
unit price of pack of 10 = 420p / 10 = 42p per pen oe	**M1**
pack of 10 is better value, cheaper by 3p per pen cao	**A1**

Answer: **Pack of 10 is better value; it is cheaper by 3p per pen (42p compared with 45p).**

© Revision Library | revisionlibrary.co.uk