

**SMART EXAM RESOURCES**  
**CAMBRIDGE LOWER SECONDARY MATHS**  
**STAGE 8**  
**TOPIC: RATIOS AND PROPORTION**  
**SET-1**

- 1 \$44 is shared between David, Jo and Mary in the ratio 2 : 3 : 5

How much does each receive?

David \$ .....

Jo \$ .....

Mary \$ ..... [2]

## Mark Scheme:

Answer:

David: 8.8

Jo : 13.2

Mary: 22

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- 2 Mike and Carlos share some money in the ratio 2 : 5

Draw a ring around the correct statement.

Mike gets  $\frac{2}{5}$  of the money.

Mike gets  $\frac{5}{2}$  of the money.

Mike gets  $\frac{2}{7}$  of the money.

Mike gets  $\frac{2}{3}$  of the money.

[1]

## Mark Scheme:

Mike gets $\frac{2}{7}$ of the money.	1	Accept any clear indication.
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- 3 (a) Ahmed has a box containing 154 pencils that are yellow, green or blue.  
The ratio of yellow to green to blue pencils is 2:5:7

Work out the number of green pencils in the box.

..... [2]

- (b) Ahmed also has two boxes of pens.  
Both boxes contain red and black pens only.  
The table gives some information about the colours.

	Ratio of red to black pens	Proportion of red pens
<b>Box 1</b>	2:7	
<b>Box 2</b>		$\frac{3}{10}$

Complete the table.

[2]

## MARK SCHEME

(a)	55	2	Award 1 mark for $\frac{5}{14} \times 154$ or equivalent  or for finding one share is worth 11										
(b)	<table><tr><td></td><td>Ratio of red to black pens</td><td>Proportion of red pens</td></tr><tr><td>Box 1</td><td>(2 : 7)</td><td><math>\frac{2}{9}</math></td></tr><tr><td>Box 2</td><td>3 : 7</td><td><math>\left(\frac{3}{10}\right)</math></td></tr></table>		Ratio of red to black pens	Proportion of red pens	Box 1	(2 : 7)	$\frac{2}{9}$	Box 2	3 : 7	$\left(\frac{3}{10}\right)$	2	Award 1 mark for each correct answer.	Accept any equivalent fractions and ratios.
	Ratio of red to black pens	Proportion of red pens											
Box 1	(2 : 7)	$\frac{2}{9}$											
Box 2	3 : 7	$\left(\frac{3}{10}\right)$											

- 4 Write this ratio in its simplest form.

0.2 m : 17 cm

..... : ..... [1]

## MARK SCHEME

20 : 17 correct answer only	1	Do not accept equivalents. Do not accept with units included.
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**5** Write each ratio in its simplest form.

**(a)** 550 cm : 2.25 m

..... : ..... [2]

**(b)** 115 : 46 : 161

..... : ..... : ..... [1]

## Mark Scheme:

(a)	22 : 9	2	Award 1 mark for partially simplified ratio, e.g. 550 : 225 110 : 45 22 cm : 9 cm	Accept units in ratio for 1 mark, but inconsistent units scores 0 marks, e.g. 110 cm : 45 m.
(b)	5 : 2 : 7	1		