

**SMART EXAM RESOURCES**

**STAGE 7 MATHEMATICS**

**TOPIC QUESTIONS**

**TOPIC: FRACTIONS**

**SET-1**

- 1 Draw a ring around all the numbers that are greater than  $\frac{11}{16}$  and less than  $\frac{15}{16}$

0.45

0.55

0.65

0.75

0.85

0.95

[1]

**Mark Scheme:**

0.45	0.55	0.65	<b>0.75</b>	<b>0.85</b>	0.95	<b>1</b>	Both correct with no extras. Accept any clear indication.
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2 (a) Convert these fractions to decimals.

$$\frac{13}{16} = \text{.....}$$

$$\frac{23}{32} = \text{.....} \quad [1]$$

(b) Write down a decimal between  $\frac{13}{16}$  and  $\frac{23}{32}$

..... [1]

## Mark Scheme:

a)	0.8125 0.71875	1	Both must be correct for the award of 1 mark.
b)	Any decimal between 0.71875 and 0.8125	1	Allow a follow though for a decimal between <i>their</i> two answers in part (a).

3 Mia chooses two of these numbers.

2

3

5

11

13

15

When she divides one number by the other the answer is 0.8 correct to one decimal place.

Work out which two numbers she chooses.




\_\_\_\_\_ and \_\_\_\_\_ [1]

**Mark Scheme:**








11 and 13	1	In either order.
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A security code is made up from one number and then one shape.

4                      **Number:**    1                      2                      3                      4

**Shape:**                                                

(a) Complete the sample space diagram.

		Shape		
				
Number	1			1 
	2			2 
			3 	
		4 		

[1]

(b) Eva says,

‘The number in my security code is even.’

Ahmed chooses an even number and a shape at random.

Find the probability that Ahmed chooses Eva’s security code.

\_\_\_\_\_ [1]

## Mark Scheme:

(a)	<table><tr><th colspan="2" rowspan="2"></th><th colspan="3">Shape</th></tr><tr><th>□</th><th>○</th><th>△</th></tr><tr><td rowspan="4">Number</td><td>1</td><td>1□</td><td>1○</td><td>1△</td></tr><tr><td>2</td><td>2□</td><td>2○</td><td>2△</td></tr><tr><td>3</td><td>3□</td><td>3○</td><td>3△</td></tr><tr><td>4</td><td>4□</td><td>4○</td><td>4△</td></tr></table>			Shape			□	○	△	Number	1	1□	1○	1△	2	2□	2○	2△	3	3□	3○	3△	4	4□	4○	4△	1 Must be number first then shape.
				Shape																							
		□	○	△																							
Number	1	1□	1○	1△																							
	2	2□	2○	2△																							
	3	3□	3○	3△																							
	4	4□	4○	4△																							
(b)	$\frac{1}{6}$	1 Accept equivalent fractions, decimals and percentages, 16.7%, 0.167. Do <b>not</b> accept truncation at 2sf i.e. 16%, 0.16  Do <b>not</b> accept ratio answers 1 : 6 or words 1 in 6																									



5 Here are some number cards.

6

10

5

11

7

Use two of the cards to make a fraction which is less than  $\frac{1}{2}$

<hr/>

[1]

**Mark Scheme:**

	$\frac{5}{11}$	<b>1</b>	
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- 6 Put a ring around the calculation with the largest answer.

$$\frac{2}{5} \text{ of } 410 \qquad 38\% \text{ of } 420$$

Show how you know.

[2]

## Mark Scheme:

Part	Mark	Answer	Further Information
	2	$\frac{2}{5}$ of 410      38% of 420 and $(\frac{2}{5} \text{ of } 410 =) 164$ and $(38\% \text{ of } 420 =) 159.60$	Award 1 mark for 159.60 or 164 seen
<b>Total</b>	<b>2</b>		