

SMART EXAM RESOURCES
STAGE 9 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	0.75	0.85	0.95	1	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 border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2" rowspan="2"></th> <th colspan="3">Shape</th> </tr> <tr> <th>□</th> <th>○</th> <th>△</th> </tr> </thead> <tbody> <tr> <th rowspan="4">Number</th> <th>1</th> <td>1□</td> <td>1○</td> <td>1△</td> </tr> <tr> <th>2</th> <td>2□</td> <td>2○</td> <td>2△</td> </tr> <tr> <th>3</th> <td>3□</td> <td>3○</td> <td>3△</td> </tr> <tr> <th>4</th> <td>4□</td> <td>4○</td> <td>4△</td> </tr> </tbody> </table>			Shape			□	○	△	Number	1	1□	1○	1△	2	2□	2○	2△	3	3□	3○	3△	4	4□	4○	4△	<p>1 Must be number first then shape.</p>
				Shape																							
		□	○	△																							
Number	1	1□	1○	1△																							
	2	2□	2○	2△																							
	3	3□	3○	3△																							
	4	4□	4○	4△																							
(b)	$\frac{1}{6}$	<p>1 Accept equivalent fractions, decimals and percentages, 16.7%, 0.167. Do not accept truncation at 2sf i.e. 16%, 0.16</p> <p>Do not accept ratio answers 1 : 6 or words 1 in 6</p>																									

5 Here are some number cards.

6

10

5

11

7

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

$$\frac{\square}{\square}$$

[1]

Mark Scheme:

	$\frac{5}{11}$		1	
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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 $(\frac{2}{5}$ of 410 =) 164 and (38% of 420 =) 159.60	Award 1 mark for 159.60 or 164 seen
Total	2		