

### Escape the Room Answers



Solve the clues hidden around the room to reveal the ten-digit code needed to escape the room.

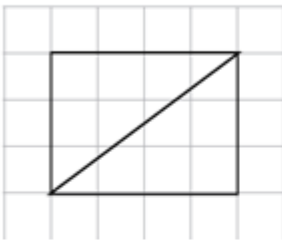
Record the digits in the table as you crack the clues.

1 <sup>st</sup> digit	2 <sup>nd</sup> digit	3 <sup>rd</sup> digit	4 <sup>th</sup> digit
9	6	2	4
5 <sup>th</sup> digit	6 <sup>th</sup> digit	7 <sup>th</sup> digit	8 <sup>th</sup> digit
8	4	9	3
	9 <sup>th</sup> digit	10 <sup>th</sup> digit	
	7	9	

### Tuesday

1) Grace is correct in her thinking. When the two triangles are placed together, this creates a rectangle. If we find the area of the rectangle then halve it, we will have the area of one triangle.

Children should have drawn a rectangle made up of the two triangles, for example:



- 2) a) Aman has counted only the whole squares and has not included the part squares.  
 b) Aman has counted all the part squares as whole 1cm<sup>2</sup> squares.

1) The total area remaining is 48.5cm<sup>2</sup>.

- 1) a) 20cm<sup>2</sup>  
 b) 30cm<sup>2</sup>  
 2) a) 10cm<sup>2</sup>  
 b) 15cm<sup>2</sup>

The area of the triangle is half of the area of the rectangle.

- 3) Calculate the area of each of the shaded right-angles triangles by working out the area of the complete rectangle then dividing it by 2.
- a) Area of rectangle = 18cm<sup>2</sup>  
 Area of triangle = 9cm<sup>2</sup>
- b) Area of rectangle = 48cm<sup>2</sup>  
 Area of triangle = 24cm<sup>2</sup>
- c) Area of rectangle = 28cm<sup>2</sup>  
 Area of triangle = 14cm<sup>2</sup>

- 4) a) Area of triangle = 12cm<sup>2</sup>  
 b) Area of triangle = 10cm<sup>2</sup>  
 c) Area of triangle = 32cm<sup>2</sup>



- 1) Dylan has the correct calculation as he has multiplied the base by the perpendicular height before dividing by 2.

Elena has incorrectly multiplied the base by the longest side (the hypotenuse) instead of by the perpendicular height, before dividing by 2.

- 2) a) Incorrect as the 48 should be divided by 2.  
b) This is the correct answer.  
c) Incorrect as the 60mm should have been converted to 6cm.

- 1) Each triangle within the rectangle has a value of  $64\text{cm}^2$  ( $256\text{cm}^2 \div 4 = 64\text{cm}^2$ ).  
Therefore only Triangle b could have come from the rectangle as it has an area of  $64\text{cm}^2$  ( $16 \times 8 \div 2 = 64\text{cm}^2$ ).

As the triangle must have an area of  $64\text{cm}^2$  then the triangle could have the following side lengths:

16cm  $\times$  8cm has already been given

1cm  $\times$  128cm

2cm  $\times$  64cm

4cm  $\times$  32cm

- 2) As the triangle has an area of  $24\text{cm}^2$  then the triangle could have the following dimensions:  
Base = b and Height = h  
Triangle 1: b = 3cm and h = 16cm  
Triangle 2: b = 4cm and h = 12cm

### Wednesday

Put the numbers that the arrows are pointing to in order from smallest to biggest. The highlighted number below is the code for the safe!

$\frac{3}{8}$	$1\frac{6}{10}$	2.6	3	3.5	5.44	8.5	10
---------------	-----------------	-----	---	-----	------	-----	----

Put the numbers that the arrows are pointing to in order from smallest to biggest. The highlighted number below is the code for the safe!

0.27	0.35	3	$3\frac{4}{10}$	5.44	$6\frac{3}{8}$	8.55	10
------	------	---	-----------------	------	----------------	------	----

## Thursday

1)  $3 + 2 + 5 + 6 = 16$

$16 \div 4 = 4$

The mean number of goals scored was 4.

2)  $85 + 60 + 65 + 70 + 65 = 345$

$345 \div 5 = 69$

The mean rainfall for the 5 months was 69mm.

3) Jacob:  $90 \div 6 = 15$

Emily:  $108 \div 6 = 18$

Adil:  $96 \div 6 = 16$

	Jacob	Emily	Adil
Week 1	13	18	19
Week 2	20	20	18
Week 3	16	17	20
Week 4	17	18	15
Week 5	10	15	7
Week 6	14	20	17
<b>Mean Score</b>	<b>15</b>	<b>18</b>	<b>16</b>

- 1) a) False – group A contains the tallest child (140cm) but the group's mean height of 130cm is the shortest.
- b) False – group C has the most children but the tallest mean height of 132cm.
- c) True – group A would now have a mean height of 133cm, which is 1cm taller than group C's and 2cm taller than group B's.
- 2) a) True – Ola's mean lap time was 65 seconds and Jessica's was 61 seconds. This means that Ola's time was 4 seconds slower.
- b) False – Usman's mean lap time was 58 seconds, which is less than one minute.
- c) False – when added together, Henry and Usman had a mean lap time of 65 seconds whereas Jessica and Ola had a mean lap time of 63 seconds. Jessica and Ola's mean time was therefore 2 seconds faster than Henry and Usman's.



- 1) Missing values are given in the table.

	Ava	Brody	Chen
Throw 1	8.4	8	11.2
Throw 2	7.9	7.1	9.4
Throw 3	10.4	6.2	8.3
Throw 4	8.6	7	6.1
Throw 5	6.6	8.8	9.6
Throw 6	9.1	b) 7.9	c) 9.4
Mean Average Distance Thrown	a) 8.5	7.5	9

- 2) There are two possibilities:  
Morgan, Aleena and Oscar;  
Olivia, Felix and Aleena.
- 3) There are various possibilities. Accept sets of four numbers which have a total of 40, for example:  
9, 11, 7 and 13;  
12, 8, 15 and 5;  
6, 14, 10 and 10.