



Aberdare Community School
Mathematics Department

WJEC GCSE

Higher – Calculator

Shape

Properties of shapes

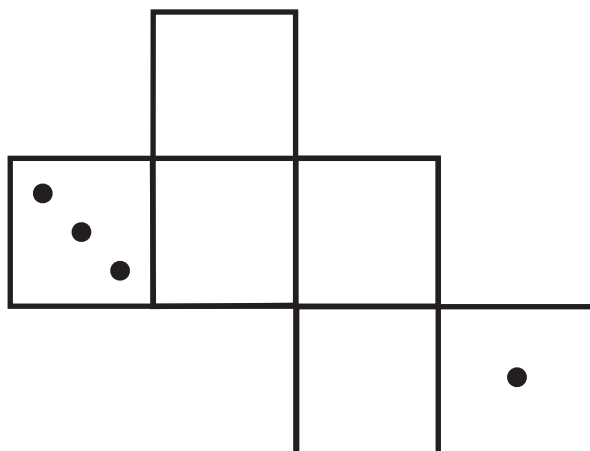
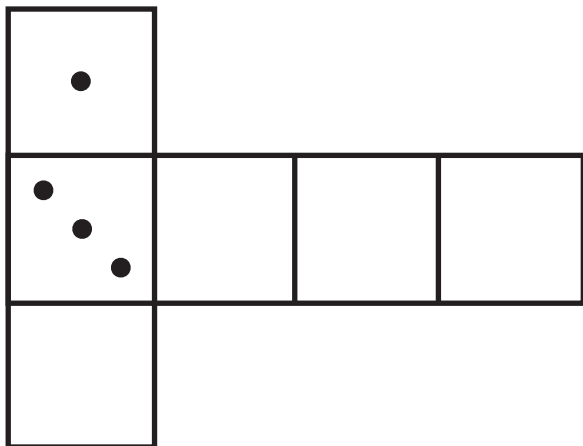
Name:

Set:

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Teacher:

1. The numbers on opposite faces of a dice add up to 7.
Complete the following diagrams for nets of dice.



[4]

2. Owen works in a DIY warehouse.
He is asked to sort some tiles.
He has the following shapes of tiles to sort.

Square Kite Rhombus Parallelogram

- (a) He is asked to sort the tiles using the table shown below.
Complete the table.

Tiles with equal diagonals	All other tiles

[2]

- (b) Owen is then asked to sort the tiles differently using the table shown below.
Complete the table.

Tiles with opposite sides parallel	All other tiles

[2]

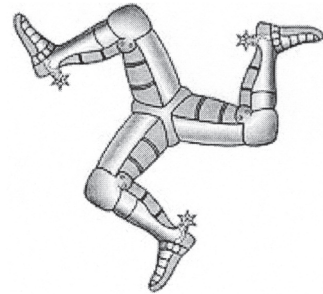
2. A plate manufacturer wishes to design a pattern to be printed on a new circular dinner plate. They consider three possible designs as shown below.



Rings



Petals



Legs

The new design must satisfy the following criteria.

Given that

n = the number of lines of symmetry

r = the order of rotational symmetry

then $n > 2$ and $r - n = 0$

Complete the following table.

Design	n	r	Satisfies the criteria? Yes or No
Rings			
Petals			
Legs			

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.....

[3]

3. (a) Complete the following table.

[3]

Quadrilateral	Number of lines of symmetry	Order of rotational symmetry
Kite		
Parallelogram		
Rhombus		