Maths

Activity 1 & 2 – Watch the videos on regular and irregular polygons and answer the questions below.

Maths Skills Practise:
Daily Challenge:

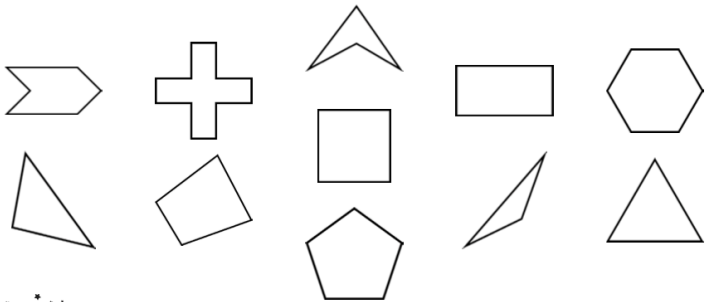
JUNE MATHS MASTERS

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1 What number is represented here: MCCXII?	2 What is double 357? Can you work it out 2 ways?	3 What is 765,551 rounded to the nearest 1000?	4 Is 43 x 10 the same as 4300 ÷ 100? Why?	5 If x – 57 = 35 + 76, what is the value of x?	6 What's missing in this sequence: 3, 6, 10, 15, __, 28. How do you know?	7 What is 13,563 rounded to the nearest 100? What is the rule?
8 How many degrees in a complete turn?	9 What is 10.7 – 4.9? How did you work it out?	10 If y = 37, what is the value of x in 'y + 67 = x'?	11 One third of a number is 59, what was the number?	12 Which number is bigger: 267676 or 276767? Describe how you know.	13 Calculate 4 x 17 + 4.	14 List all the prime numbers between 30 and 60.
15 (6 x 5) + 6 = 30. Is this right? Why?	16 What is three and two thirds plus two thirds?	17 What is 10 x 13? What other calculations would give you the same answer?	18 What is 4.04 + 2.07 + 9?	19 Put these numbers in descending order: 7543, 3457, 7453, 4753, 5743.	20 How many grams in 4.7kg? How do you know?	21 What time is 22:05 in words? Can you draw it on a clock face?
22 What is today's date in Roman Numerals?	23 What are the properties of a triangular prism? Can you draw one?	24 How many ml in 5.43l?	25 Which fraction is bigger: 3/5 or 40/100? How do you know?	26 Can you draw a regular and an irregular hexagon?	27 Jake says, "If y+7= 5, then y must be 2." Is he right? How do you know?	28 What is 14.3 - 1.7 + 5.2?
29 Joshua says, "the area of my shape is 32cm so the perimeter **must** be 24cm". Do you agree?	30 **TRICKY QUESTION:** How many minutes in a normal school week?	**Have fun doing a Maths question a day! Challenge yourself to talk to the people at home and show off what you know!**				

Reasoning & Problem Solving
Try any of the challenges on this website:
http://www.iseemaths.com/lessons56/

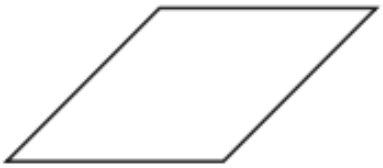
Irregular & Regular Polygons

Sort these shapes into the Carol diagram below

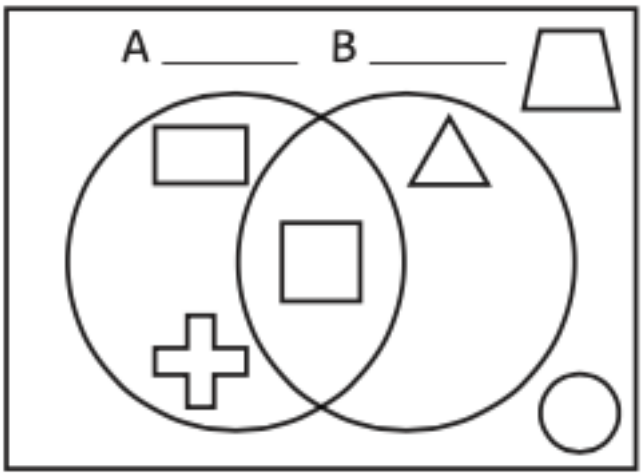


	Regular	Irregular
Right Angle		
No Right Angle		

Niall says that this rhombus is a regular polygon because all the sides are the same length. Do you agree or disagree? Why?



Below is a Venn diagram of regular and irregular polygons. What could the title be for each section? Explain your reasoning



Irregular and Regular Polygons 2

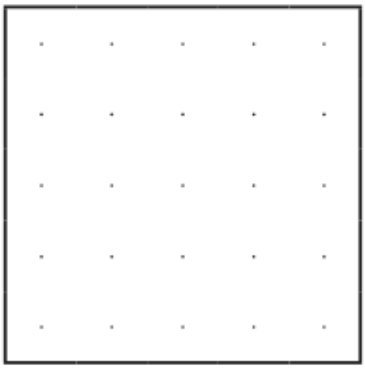
Draw an example of the following. If you have a protractor use it to help you but if not try to be as accurate as possible.

- Irregular triangle
- Irregular quadrilateral (a shape with 4 sides)
- Regular pentagon
- Irregular hexagon
- Regular triangle
- Irregular octagon

Investigation:
Look at the shapes on the sheet below. How many lines of symmetry do they have? Complete the table. What do you notice about your findings? You can use a small mirror to help you if you have one

Regular Shape	Number of Sides	Number of Lines of Symmetry
Equilateral Triangle	3	
Square	4	
Pentagon	5	
Hexagon	6	
Heptagon	7	
Octagon	8	
Nonagon	9	
Decagon	10	

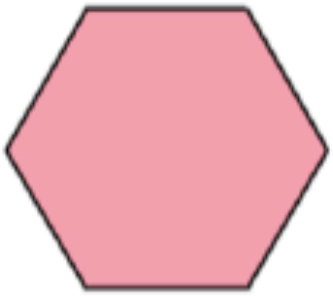
Challenge:
How many different irregular pentagons can you draw on the 5 × 5 geoboard?
Use a different colour for each pentagon or use isometric dotty paper to record on separate 5 × 5 grids.
Remember – they must not be congruent.



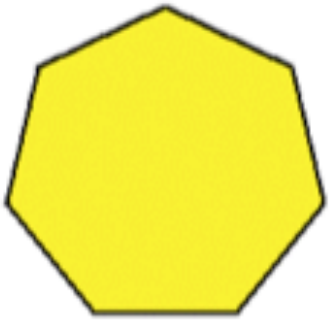
Equilateral triangle

Square

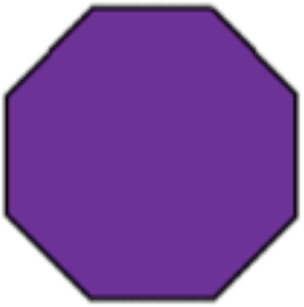
Regular Pentagon



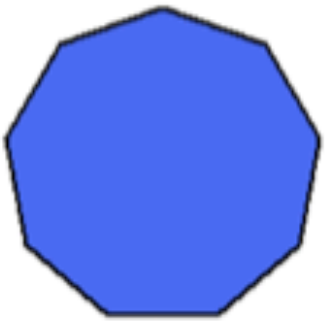
Regular Hexagon



Regular Heptagon



Regular Octagon



Regular Nonagon

Regular Decagon

Regular Dodecagon