

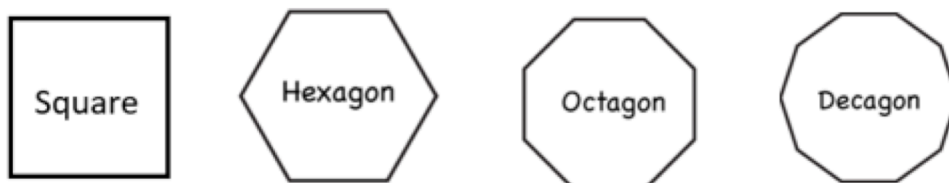
DEPARTMENT OF MATHEMATICS

PROBLEM SOLVING CHALLENGE

Q1.

Junior Cycle

Analyse the following pattern below and answer the subsequent questions.



- The first shape in the pattern has four sides but how many does the 100th shape have?
- If the perimeter of every shape in the pattern is 6 units. What is the length of one side of the 31st shape. Write your answer as a decimal.
- The length of a side of a certain shape in the above pattern is 0.25. What number shape is it in the pattern?

Q2.

Senior Cycle

Analyse the following patterns very carefully. Find the next term in each sequence and explain how you got your answer.

1) 30, -60, -120, 150, 210, -240, -300, 330, 390, ?

2) 6, 46, 246, 1246, 6246, ?

Answers on an A4 sheet with your Name, Year and Class should be given to Mr. McManus or to Mr. McEvoy in room 33 before 4pm on Thursday 30th of November.

Monthly Prize for both **Junior** and **Senior** Cycle.*

Good Luck.

Junior Cycle students answer question 1 only.

Senior Cycle students answer question 2 only