

Matchstick patterns III

This task is about continuing a pattern and describing a rule.



Shape A

Shape B

Shape C

a) Use your matchsticks to make the next two shapes in this pattern. When you have made the shapes either show them to your teacher or draw them in the boxes below.



Shape D



Shape E

b) Write the rule that explains how many **extra** matchsticks you need for each new shape in the pattern.

c) Fill in the table below to show how many triangles there are in each shape and how many matchsticks have been used. The answers for Shape A have been written in for you.

i)	Shape A makes <input type="text" value="1"/> triangle out of <input type="text" value="3"/> matchsticks.
ii)	Shape B makes <input type="text"/> triangles out of <input type="text"/> matchsticks.
iii)	Shape C makes <input type="text"/> triangles out of <input type="text"/> matchsticks.
iv)	Shape D makes <input type="text"/> triangles out of <input type="text"/> matchsticks.
v)	Shape E makes <input type="text"/> triangles out of <input type="text"/> matchsticks.

d) Describe the rule that explains the relationship between the number of triangles and the number of matches needed.
