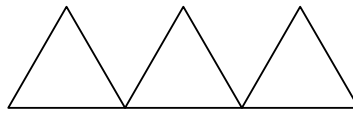
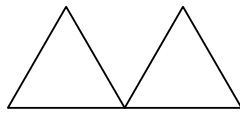
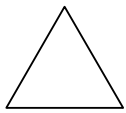


Number Patterns and Rules

Question 1

Name: _____

Use the following diagrams to complete a table of value



1

2

3

4

No of	No. of matches	1 st difference
1		
2		
3		
4		

- a. Complete the table for 5 and 6.
- b. Fill in the 1st difference column. As the number of triangles goes up by one how much do the number of matches go up by?
- c. How many matches is theoretical present if there was diagram 0.
- d. Write down a rule that calculates the number of matches.
- e. Work out the number of matches for diagram 32.

Question 2

This table links the cost of taxi fares to the distance travelled.

Distance (in km)	Cost (in \$)	
1	\$2.30	
2	\$4.30	
3	\$6.30	
4		
5		

- Using patterns for the values in the table, fill in the cost for 4 km and 5 km.
 - Fill in the 1st difference column. How much does the cost go up for each kilometre?
 - What is the theoretical cost of travelling 0 kilometres?
 - Write down a rule that relates the cost to the number of kilometres.
- e. Work out the cost for travelling 16 kilometres.