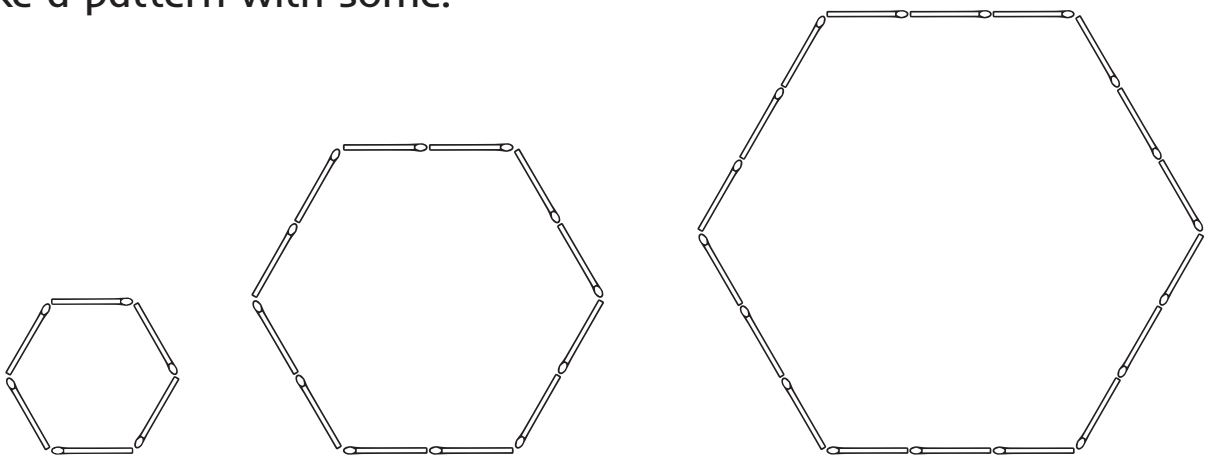
Geometric Patterns

Name:

1. Justice decided to try and make some different shapes with all his match sticks. He has learned about hexagons and thought he'd make a pattern with some.



(a) Describe what you see in the above pattern.
(b) See if you can complete the table below using the hexagon number and the number of matchsticks used to make it.

Hexagon number	**1**	**2**	**3**
Number of matchsticks			

(c) Has the table above helped you see a quick way to work out how many matchsticks you need each time? What is the quick method?
(d) How many match sticks would you need to make the 5th Hexagon?
(e) How many match sticks would you need to make the 100th Hexagon?

2. (a) Design and draw your own matchstick pattern.
(b) Describe how your pattern changes.

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Answer sheet

1. (a) Each hexagon has an extra matchstick for every side.

(b)

Hexagon number	1	2	3
Number of matchsticks	6	12	18

(c) Yes, add 6 to each hexagon.
(d) 30 matchsticks
(e) 600 matchsticks

2. (a) Up to learners creativity, but must have constant change occurring.
(b) Must be correct according to learners pattern.

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