



Exploring with geometric patterns

CAPS Statement

Patterns, functions and algebra;

Geometric patterns: Input and output values:

Determine input values, output values and rules for the patterns and relationships using flow diagrams

Note

Input value is the act or process of putting a number into a flow diagram.

Output value is the production of a certain amount.

Activity 1

Fill in the output value by following the rule.

Input	Relationship	Output
6	$\times 18$	
9	$\times 18$	
12	$\times 18$	
18	$\times 18$	
20	$\times 18$	

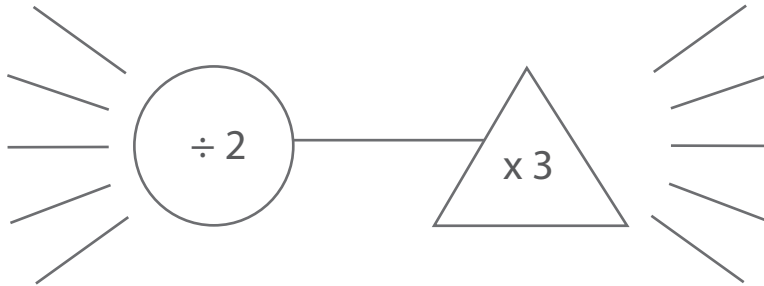
Input	Relationship	Output
112	$\div 7$	
147	$\div 7$	
224	$\div 7$	
294	$\div 7$	
350	$\div 7$	



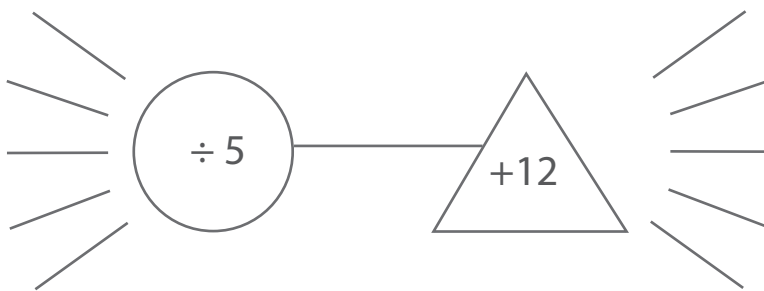
Activity 2

Working in pairs: One person fills in the input values and one person works out the output values. Then you swap roles. Remember that the answers must not have remainders, they must be whole numbers.

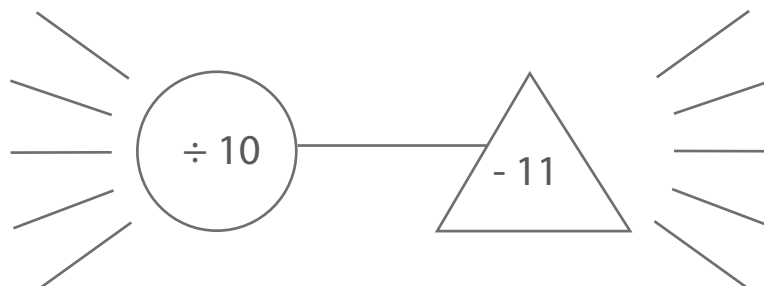
(a)



(b)



(c)



Teacher Tip



In Activity 1 discuss with the learners if they noticed a relationship between certain numbers. For example, 6 is multiplied by 18 to reach 108. 6 doubled is 12, therefore the output answer of 6 will double to get the output answer for 12 ($2 \times 108 = 216$).

Observe the learners in Activity 2 and ensure that each learner has a turn with input and output values.

