

Working with patterns

CAPS Statement

Patterns, Functions and Algebra

Investigate and extend numeric patterns looking for relationships or rules of patterns sequences involving a constant difference or ratio of learner's own creation

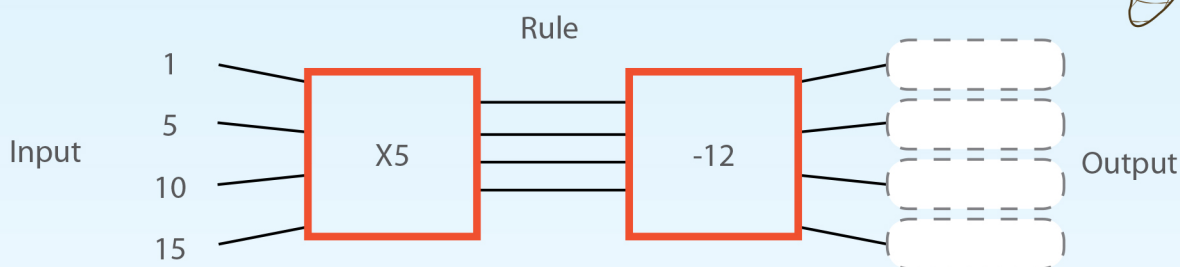
Note

You will learn how to:

- extend number patterns
- determine rules for number sentences
- use flow diagrams to determine rules and patterns
- determine patterns with constant ratios.

Activity 1

- (a) Complete the following diagram:

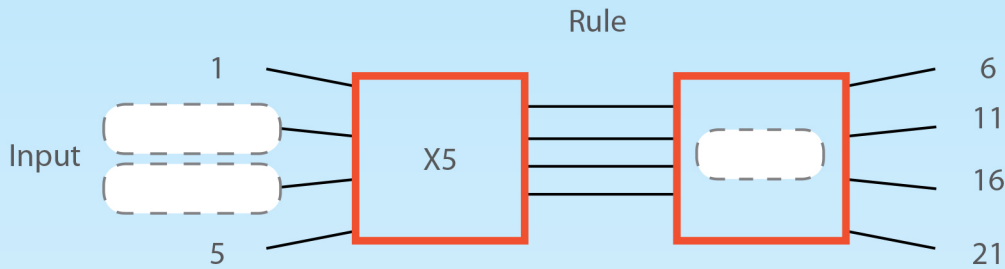


- (b) The number sentence for the flow diagram is: **input x 5 - 12 = output**

Determine the 20th and 50th term.

Activity 2

- (a) Fill in the missing values in the diagram:



- (b) Write a number sentence for the above diagram.

_____.

- (c) If the input value is 11, what will the output value be?

_____.

Activity 3

- (a) Write out a number pattern beginning with the following numbers. Create your own rule for each pattern.

1; _____; _____; _____; _____; _____; _____.

7; _____; _____; _____; _____; _____; _____.

12; _____; _____; _____; _____; _____; _____.

- (b) Fill in the missing numbers:

1; 3; _____; 27; _____.

8; 20; 32; _____; _____, _____.

240; 210; _____; 150; _____; _____.

Describe the patterns you saw above.

_____.

_____.



Teacher Tip

Develop rules for patterns that learners can use in order to understand the concepts better.

