

# Worksheet: Patterns in Mathematics

## Learning Pattern

**Q1:** Find out the missing numbers and figure out what the pattern rule is for each box

17, 20, 23, 26, 29, \_\_\_\_, \_\_\_\_, \_\_\_\_

25, 30, 35, 40, 45, \_\_\_\_, \_\_\_\_, \_\_\_\_

\_\_\_\_, \_\_\_\_, \_\_\_\_, 60, 70, 80, 90, 100

8, \_\_\_\_, 24, \_\_\_\_, 40, \_\_\_\_, \_\_\_\_, 64

\_\_\_\_, \_\_\_\_, \_\_\_\_, 36, 45, 54, 63, 72

**Q2:** What happens when you start adding up triangular numbers, i.e., take 1,  $1 + 3$ ,  $1 + 3 + 6$ ,  $1 + 3 + 6 + 10$ , ... ? Which sequence do you get? Can you explain it using a picture of a triangle?

## Fill in the Blanks

**Q1:** A \_\_\_\_\_ polygon is a shape with all sides and angles equal.

**Q2:** The sequence 1, 8, 27, 64, ... represents the \_\_\_\_\_ of numbers.

**Q3:** \_\_\_\_\_ numbers can be represented as dots forming a perfect square.

**Q4:** The pattern 2, 4, 6, 8, 10, ... is a sequence of \_\_\_\_\_ numbers.

**Q5:** \_\_\_\_\_ numbers increase by the same amount each time, and this sequence is called counting numbers.

## True or False

**Q1:** The sequence 1, 4, 9, 16, 25, ... is an example of cube numbers.

**Q2:** A regular pentagon has equal sides but different angles.

**Q3:** The sequence of odd numbers starts with 1, 3, 5, 7, ...