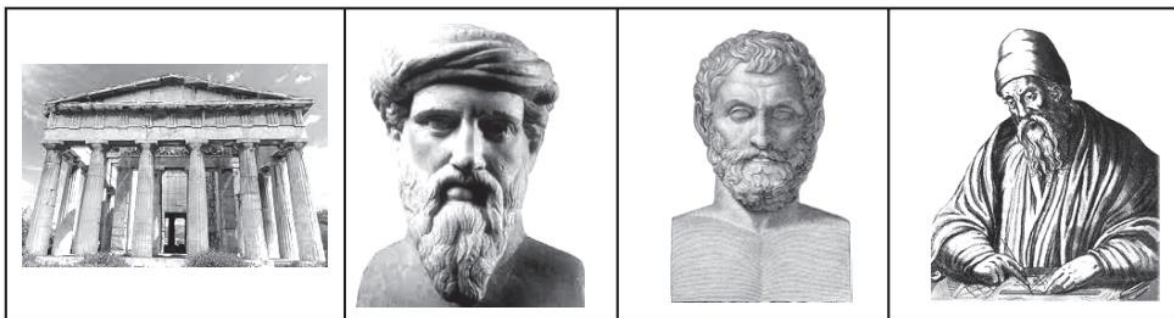


# Introduction to Euclid's Geometry

## Case Study Based Questions

### Case Study 1

A National Public School organised an education trip to a museum. Almost all the students of class IX went to the trip with their teacher of Mathematics. They saw many pictures of mathematicians and read about their contributions in the field of Mathematics. After visiting the museum, teacher asked the following questions from the students.



On the basis of the above information, solve the following questions:

**Q1. Pythagoras was a student of:**

- a. Euclid
- b. Thales
- c. Archimedes
- d. Both a. and b.

**Q2. Name of the mathematician who is visible in the last picture, is:**

- a. Euclid
- b. Pythagoras
- c. Thales
- d. None of these

**Q3. Euclid stated that 'A circle can be drawn with any centre and any radius, is a/an:**

- a. definition
- b. postulate
- c. axiom
- d. proof

**Q4. In which country Thales belong to?**

- a. Greece
- b. Egypt
- c. Babylonia
- d. Rome

### Q5. Which of the following needs a proof?

- a. Definition
- b. Theorem
- c. Axiom
- d. Postulate

### Solutions

1. (b) Pythagoras was a student of Thales.

So, option (b) is correct.

2. (a) Euclid mathematician is visible in the last picture.

So, option (a) is correct.

3. (b) Euclid stated that 'A circle can be drawn with any centre and any radius' is postulate.

So, option (b) is correct.

4. (a) Thales belongs to Greece Country.

So, option (a) is correct.

5. (b) Theorem needs a proof.

So, option (b) is correct.

### Case Study 2

In a class of Mathematics, the teacher taught a chapter 'Introduction to Euclid's Geometry' in which they taught about different postulates and axioms.



On the basis of the above information, solve the following questions:

**Q1. How many axiom's are exist in Euclid's?**

**Q2. Write any one of the Euclid's postulate.**

**Q3. Write Euclid's axiom 5.**

**Q4. By which Euclid's axiom 'If  $x + y = 5$ , then  $x + y - z = 5 - z$ '?**

### **Solutions**

1. There are seven Euclid's axioms exist.
2. One of the Euclid's postulate is 'All right angles are equal to one another'.
3. Euclid's axiom 5 is 'The whole is greater than the part'.
4. If  $x + y = 5$ , then  $x + y - z = 5 - z$ .

