MATHS

BOOKS - VIDHYASANGAM - RAO'S ACADEMY MATHS (KANNADA ENGLISH)

INTRODUCTION TO EUCLID'S GEOMETRY

EXERCISE 2.1

1. Which of the following statements are true and which are false ? Give reason for your answers.

(i) Only one line can pass through a single point.

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2. Which of the following statements are true and which are false ? Give reason for your answers.

(ii) There are an infinite number of lines which pass through distinct points.

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3. Which of the following statements are true and which are false ? Give reason for your answers.

(iii) A terminated line can be produced indefinitely on both the sides.

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4. Which of the following statements are true and which are false ? Give reason for your answers.

(iv) If two circles are equal , then their radii are equal.

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5. Which of the following statements are true and which are false ? Give reason for your answers.

(v) In the given figure, If AB=PQ and PQ =XY then AB=XY.

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6. Give a definition for each of the following terms.

Are there other terms that need to defined first ? What are they and how might you define them.

(i) Parallel lines

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7. Give a definition for each of the following terms.

Are there other terms that need to defined first ? What are they and how might you define them.

(ii) Perpendicular lines

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8. Give a definition for each of the following terms.

Are there other terms that need to defined first ? What are they and how might you define them.

(iii) Line segment

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9. Give a definition for each of the following terms.

Are there other terms that need to defined first ? What are they and how might you define

them.

(iv) Radius of a circle

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10. Give a definition for each of the following terms.

Are there other terms that need to defined first ? What are they and how might you define them.

(v) Square

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11. Consider the two 'Postulates' given below.

(i) Given any two distinct points A and B , there exists a third point C , which is between A and B .

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12. Consider the two 'Postulates' given below.

(ii) There exists at least three points that are not on the same line

Do these postulates contain any undefined

terms ? Do they follow from Euclid's postulates ? Explain.

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13. If a point 'C' lies between two points A and B such that

AC =BC , then prove that $AC = \frac{1}{2}AB$. Explain by drawing the figure.

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14. In Question 4, point 'C' is called a midpoint of line segment AB. Prove that every line segment has one and only one mid point.

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15. In the figure, If AC=BD then prove that AB=CD.

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16. Why is Axiom 5, in the list of Euclid's axioms, considered a universal truth ? (Note that the Question is not about the fifth postulate).

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