MATHS

BOOKS - VGS PUBLICATION-BRILLIANT

THE ELEMENTS OF GEOMETRY

Exercise

1. Can you give any two axioms from your daily life.

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2. If A,B,lC are three points on a line and B lies between A and C, then prove that AC-AB = BC

3. Prove that an equilateral triangle can be constructed on any given line segment.

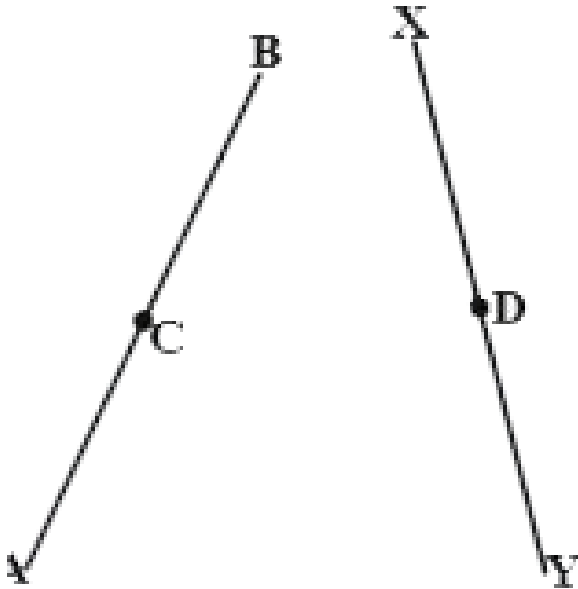**4.** Two distinct lines cannot have more than one point in common.

5. In the adjacent figure, we have AC = XD, C and D are mid points of AB and XY respectively.

Show that AB = XY.

6. How many dimensions a solid has ?

7. How many books are there in Euclid's Elements ?

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8. Write the number of faces of cube and cuboid.

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9. Answer the following:

(i) How many dimensions a solid has?

(ii) How many books are there in Euclid's Elements?

(iii) Write the numbers of faces of a cube and cuboid?

(iv) What is sum of interior angles of a triangle?

(v) Write three un-defined terms of geometry?

10. Write three undefined terms of geometry.

11. State whether the following statements are true or false? Also give reasons for your answers : All right angles are equal.

12. State whether the following statements are true or false? Also give reasons for your

answers : All right angles are equal.

13. State whether the following statements are true or false? Also give reasons for your answers : Circles with the same radii are equal.

14. State whether the following statements are true or false? Also give reasons for your

answers : A finite line segment can be extended on its both sides endlessly to get a straight line.

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15. If a point Q lies between two points P and R such that PQ = QR, prove that PQ = $\frac{1}{2}$PR.

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16. Draw an equilateral triangle whose sides are 5.2 cm. each

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17. What is a conjecture ? Give an example for it.

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18. Mark two points P and Q. Draw a line through P and Q.

Now how many lines are parallel to PQ, can you draw?

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19. Write three undefined terms of geometry.

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20. Write any four Euclid's postulates.

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21. What is a conjecture ? Give an example for it.

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22. Write any two Euclid's axioms.

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23. If a point Q lies between P and R such that $PQ = QR$, prove that $PR = 2PQ$.

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24. Mark two points A and B. Draw a line through A and B. How many lines can be drawn which are parallel to AB?

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25. Write the number of faces of cube and cuboid.

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26. Write three undefined terms of geometry.

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27. Write any two Euclid's axioms.

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28. Write any four Euclid's postulates.

29. Which of the following is an undefined term?

A. Point

B. Right angel

C. Triangle

D. Circle

Answer:

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30. The word geometry is derived from

A. Greek

B. Latin

C. English

D. Sanskrit

Answer:

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31. The Indian mathematician who used Pythagorean triplets

    A. Boudhayan

    B. Bhaskaracharya

    C. Ramanujan

    D. Aryabhatta

Answer:

32. The author of "The Elements"

A. Pythagoras

B. Thales

C. Euclid

D. Plato

Answer:

33. Statements which are self evident

A. Theorems

B. Conjectures

C. Axioms

D. Riders

Answer:

34. Statements which are neither proved nor disproved are called

    A. Axioms

    B. Postulates

    C. Conjectures

    D. Theorems

Answer:

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35. "Every even number greater than 4 can be written as some of two primes"is a

    A. Axiom

    B. Conjecture

    C. Postulate

    D. Theorem

Answer:

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36. "If equals are added to equals, the wholes are equal" is

A. Conjecture

B. Theorem

C. Statement

D. Axiom

Answer:

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37. The number of dimensions of a rectangle is

A. 3

B. 2

C. 4

D. 1

Answer:

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38. How many dimensions a solid has ?

A. 2

B. 1

C. 0

D. 3

Answer:

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39. Pyramids are found in

A. China

B. Egypt

C. Indian

D. Japan

Answer:

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40. 'Sulba sutras' are in

A. Persia

B. Mathematics

C. Hindi

D. Vedic Sanskrit

Answer:

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41. Which of the following is a simple Pythagorean triple?

A. 3,4,5

B. 5,12,13

C. 6,10,15

D. 8,15,20

Answer:

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42. Who wrote 13 books called 'The Elements'?

A. Pythagoras

B. Alexander

C. Euclid

D. Boudhayana

Answer:

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43. Which of the following has no dimensions?

A. Cube

B. Point

C. Cuboid

D. None of these

Answer:

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44. Which of the following is undefined?

A. A plane surface

B. Line segment

C. Angel

D. Triangle

Answer:

45. The boundaries of a solid are called

A. Curves

B. Lines

C. Surfaces

D. Points

Answer:

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46. Answer the following:

(i) How many dimensions a solid has?

(ii) How many books are there in Euclid's Elements?

(iii) Write the numbers of faces of a cube and

cuboid?

(iv) What is sum of interior angles of a triangle?

(v) Write three un-defined terms of geometry?

A. 4

B. 3

C. 2

D. 1

Answer:

47. Which of the following statements is false?

A. All rights angels are equal

B. Only one line pass through a given point

C. Circles same radii are equal

D. A line segment can be extended on either side to form a straight line

Answer:

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48. The edges of surfaces are

A. lines

B. Curves

C. Circles

D. Points

Answer:

49. In the adjacent figure, according to Euclid's 5th postulate, the pair of angles having the some less than $180°$ is

A. 2 and 4

B. 1 and 3

C. 3 and 4

D. 1 and 2

Answer:

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50. If $a \cdot b = a + b + 7$ for all $a, b \in z$ then inverse element of 9 is:

A. Second Axiom

B. Third Axiom

C. Fourth Axiom

D. First Axiom

Answer:

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51. The age of Rani's father was 49 years and he was 4 years more than 3 times the age of Rani, then what is the age of rani?

    A. Second Axiom

    B. Third Axiom

    C. Fourth Axiom

    D. First Axiom

Answer:

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