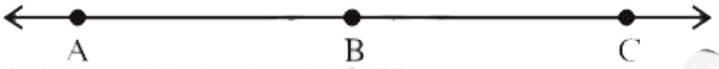
MATHS

NCERT - NCERT MATHS (KANNADA ENGLISH)

THE ELEMENTS OF GEOMETRY

Examples

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



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

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

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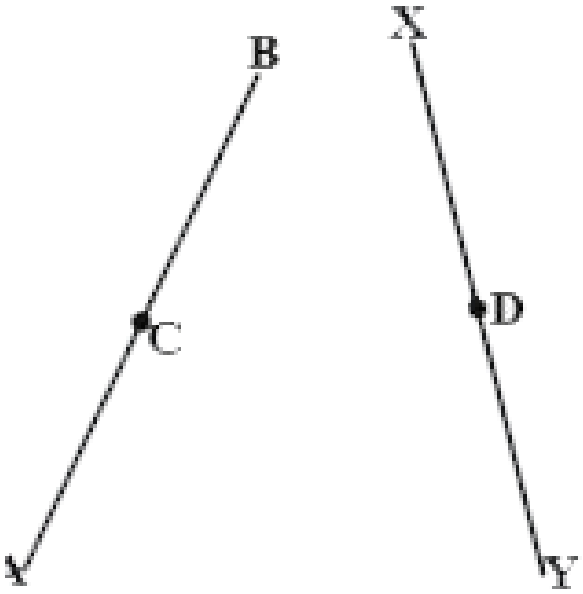
4. In the adjacent figure, we have AC = XD, C and D are mid points of AB and XY respectively. Show that AB = XY.



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Try This

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

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Exercise 3 1

1. 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?

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

a) Only one line can pass through a given point.

b) All right angles are equal.

c) Circles with same radii are equal.

d) A line segment can be extended on its both sides endlessly to get a straight line.

e) From the figure, $AB > AC$.

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3. In the figure given below, show that length $AH > AB + BC + CD$.

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

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

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6. 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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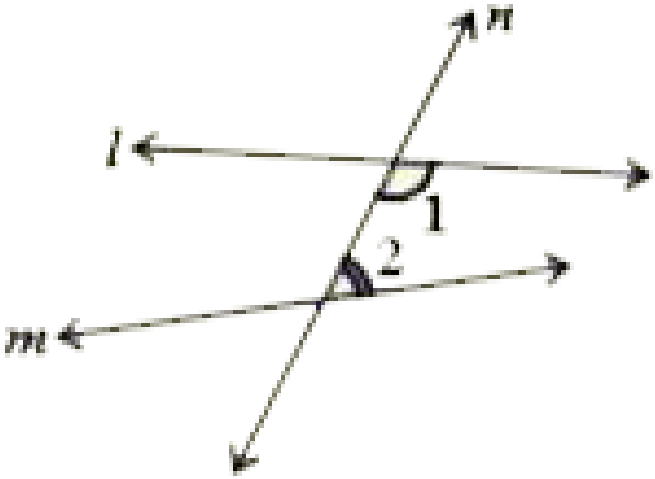
7. In the adjacent figure, a line n falls on lines 1 and m such that the sum of the interior angles 1 and 2 is less than 180^{o}, then what can you say about lines 1 and m.



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8. In the adjacent figures, If $\angle 1 = \angle 3, \angle 2 = \angle 4$ and $\angle 3 = \angle 4$ write the relations between $\angle 1$ and $\angle 2$ using an Euclid's postulate.

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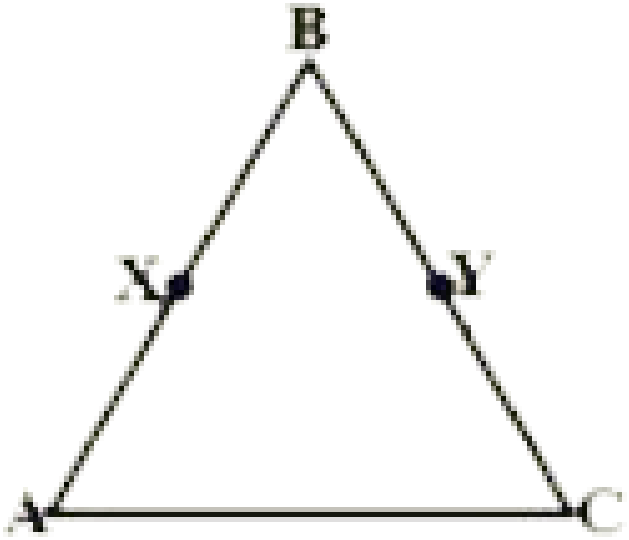
9. In the adjacent figure, we have $BX = \frac{1}{2}AB$, $BY = \frac{1}{2}BC$ and AB=BC. Show that BX = BY.



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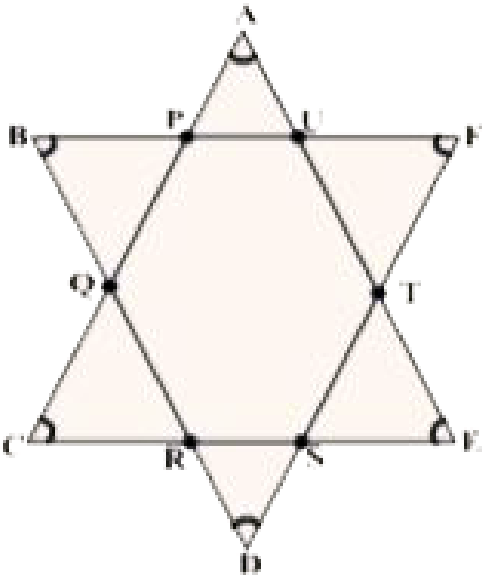
Brain Teaser

1. What is the measure of $\angle A + \angle B + \angle C + \angle D + \angle E + \angle F$ in the figure given below. Give reason to your answer.



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2. If the diagonal of a square is 'a' units, what is the diagonal of the square, whose are is doubel that of the first square?

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