रोबोकम्पास–
ऑनलाइन ज्यामिति सॉफ्टवेयर
प्रस्तुति –आशुतोष आनन्द

- **ROBOCOMPASS क्या है ?**
- **ROBOCOMPASS – प्रक्रिया**
- **ROBOCOMPASS –कार्य करने के इंटरफ़ेस को समझना |**
- **ROBOCOMPASS –में विभिन्न ज्यामितीय निर्माण कमाण्ड जानना एवं प्रयोग करना सीखना |**

–ROBOCOMPASS –सॉफ्टवेयर में बने ज्यामितीय निर्माण की फाइल को सेव करना और पहले से बनी फाइल को ओपन करना
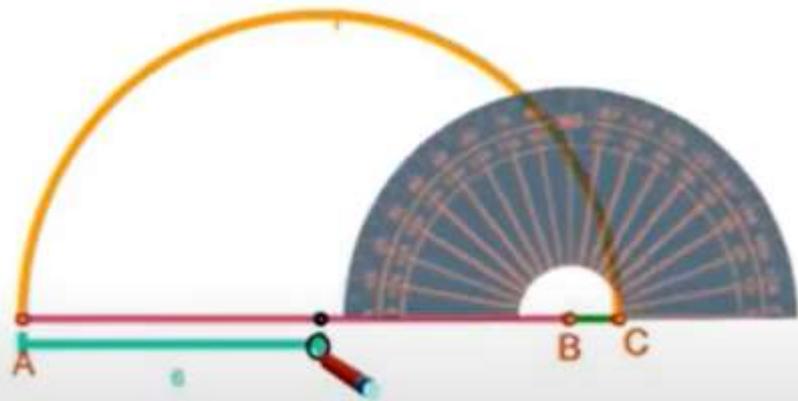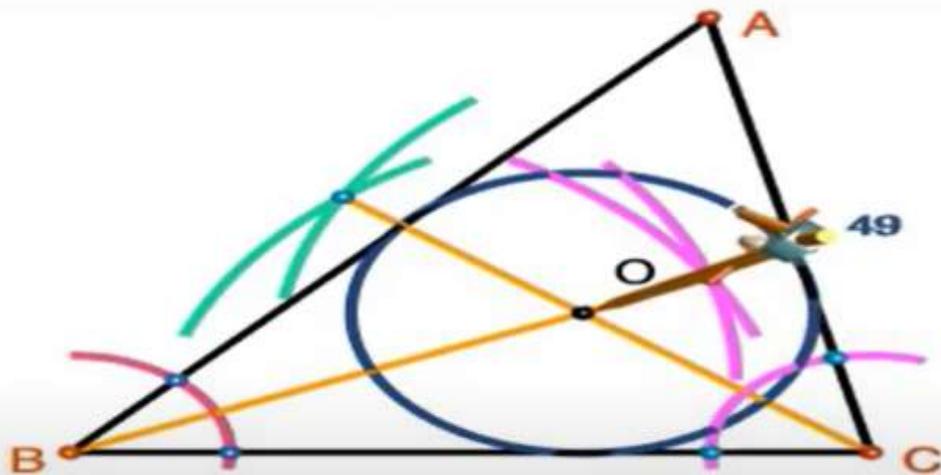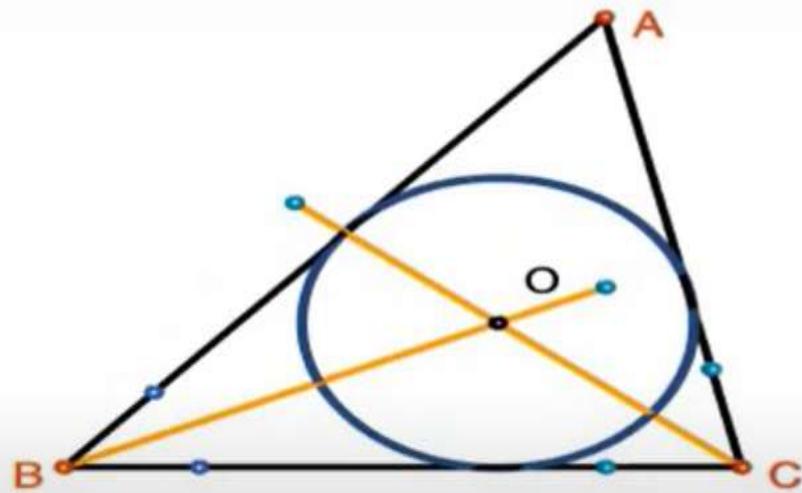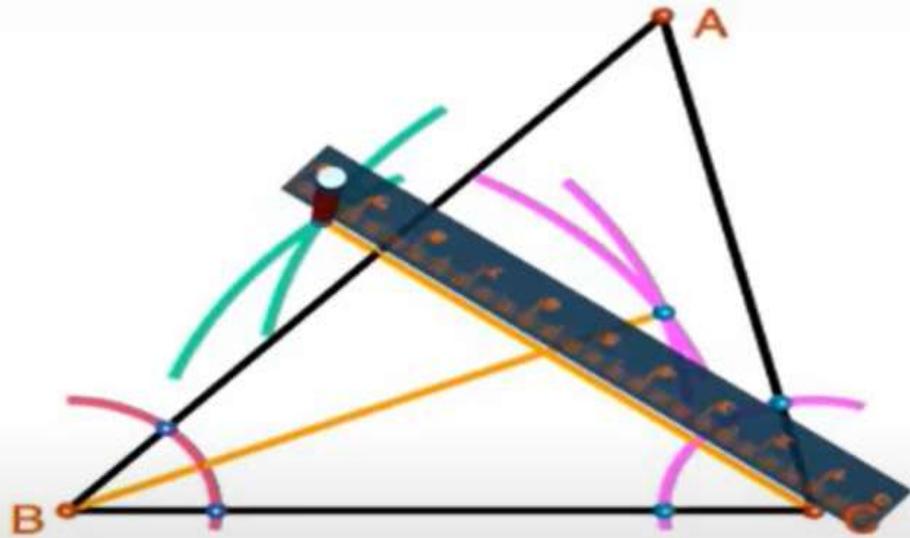
ROBOCOMPASS (रोबोकम्पास)-विवरण

❖यह एक ऑनलाइन **सॉफ्टवेयर** है जिसके माध्यम से हम लगभग सभी ज्यामितीय रचनाएँ कर सकते है

•यह ज्यामिति बॉक्स में उपलब्ध विभिन्न Tools जैसे पटरी.परकार,सेट स्कायर ,पेंसिल आदि को एनिमेटेड रूप देता है

- बिंदु   कोण की रचना
- रेखाखण्ड   कोण की माप
- चाप   रेखाखण्ड की माप
- वृत्त   समान्तर रेखा खींचना
- कटान बिंदु   लम्ब खींचना
- कोण बनाना

रोबो कम्पास (ROBOCOMPASS) - प्रक्रिया

ROBOCOMPASS पर कार्य करने के लिए सबसे पहले GOOGLE पर ROBOCOMPASS सर्च करें

- इंटरफ़ेस–

कमाण्ड एडिटर

ग्राफ शीट

MENU BAR

robo-compass Examples ▾ 📙 Untitled | Take the Tour Sign in ❓ How to

Examples ▾   📙 Unti

Copy a line segment

An Equilateral Triangle

Bisect an angle

Square

Metatron's Cube

Tangent line on a Circle

Geometric Art Pattern

Calculate An Angle

Text Using Compass

📙 Untitled

Select the *Untitled* menu to save a worksheet.

Hint: *Sign into* RoboCompass using a *Gmail account before* saving a worksheet.

Examples ▾

When the *Example* menu is selected, a dropdown list of example worksheets will display.

Hint: All example worksheets can be modified.

Take the Tour

To watch the RoboCompass demo click the *Take the Tour* button.

Sign in

Select the *Sign In* button to sign into your Gmail account.

❓ How to

Select *How to* for a list of supported commands.

GRAPHSHEET

Graphsheet: View the geometry output of entered commands in the command editor. The straightedge, setsquare, compass, protractor, and pencil graphics simulate the steps of the geometry construction for the corresponding commands.
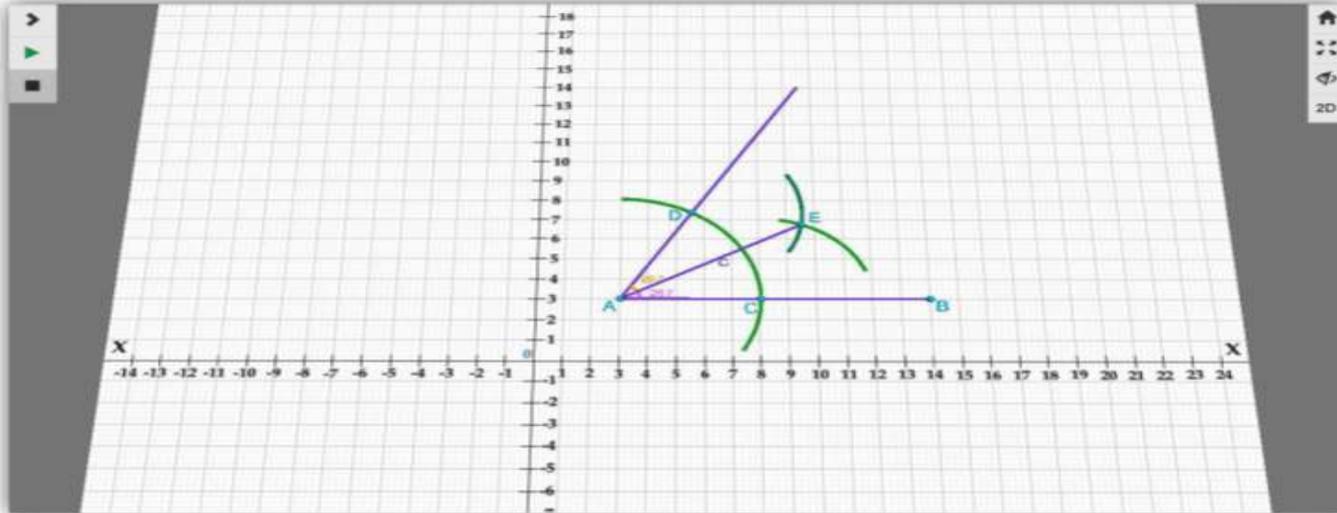
>	**Show Command Editor**
⤢	**Full Screen/ Exit**
2D	**2D/3D View**
🏠	**Reset View**
👁	**Hide Grid/ Show Grid**

COMMAND EDITOR

A=point(2,10)

B=point(8,10)

line(A,B)

New command

Delete All   Play All   Stop   Hide Command Editor

Individual delete

Individual Play

Select "New Command" to add a new command item.

line(A,B)

In the settings panel control options for:
- Play speed
- Color
- Label objects

Settings

Colors:

Show label: Label offset:

X: 0   Y: 0

Comment:

type here...

Speed:

Apply this speed to all

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COMMAND EDITOR – SETTINGS

Settings

Colors:

Show label: Label offset:

X: 0   Y: 0

Comment:

type here...

Speed:

Apply this speed to all

Colors Panel: Change an object's color.

Show Label box: To hide a label, *uncheck*, the show label box.
To position labels use the stepper options X and Y.

Comment box: Enter text to display comments with a particular object.

Speed Slider: Adjust the play speed for an individual command.
Check, *Apply this speed to all*, to apply the same speed to all commands.

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Drawing commands

Command	Purpose and Examples
point(x, y)	Example:- point(3, 4) or A=point(3, 4) where A is the label.
line(x1, y1, x2, y2)	Example:- line(0,0,-2,5) or C=line(A, B) where A, B are point labels. Length can be optionally given as line(A, B, 3) where 3 is length of segment.
arc(originPoint, radius, angleFrom, upto)	Example:- arc(point(2, 2), 3, 40, 20) Uses point(2, 2) as origin, 3 as radius and starts the arc from 40 degrees adding another 20 degree in an anticlockwise direction. A negative value for "upto" parameter will move clockwise. To copy a line, give the first parameter as line or two points as shown here arc(point1, point2, originPoint, angleFrom, upto)
perp(line, passThroughPoint, length=10)	Example:- A=perp(line(1, 2, 3, 4), point(1, 2)) draws a perpendicular line to a given line(1, 2, 3, 4) passing through point(1, 2). The last optional parameter of perp command is the length of the perpendicular line which defaults to 10
parallel(line, passThroughPoint, length=10)	Example:- parallel(line(1, 2, 3, 4), point(1, 2))

angle(point1, point2, degrees)	Example:- angle(A, B, 45, 1) The two points A and B defines the base line.The ratio is an optional parameter which controls the position of the protractor. A value of 0 places it at A, 1 at B and 0.5 in the middle.
polygon(comma separated points)	Example:- polygon(A, B, C) draws a triangle where A, B, C are points
findangle(2 lines or a polygon)	Example:- findangle(A, B) finds the angle between two lines A, B or a polygon findangle(C) (C is the label of polygon, in this case the method returns the first angle)
fill(A, B)	Fills the interior of shapes A,B.The shapes can be an arc, polygon or another fill. The command accepts any number of shapes. fill(A), fill(arc(0, 0, 3, 0, 360), D, polygon(2, 3, 4, 6, 1, 0))

Command	Purpose and Examples
dist(point1, point2)	Calculates the distance between two points. Give a dist(C) if C is a line (i.e. segment)
X(point)	Gives the X coordinate of a point A. A= X(point(2,1))
Y(point)	Gives the Y coordinate of a point A. B= Y(point(1,2))
pos(polygon or line or arc, index)	Returns the point at a given index. If a polygon A has 4 points, pos(A, 3) returns the third point, Similarly if a line's label is B a index of 2 returns the end point. Example:- pos(B, 2)
intersect(object1, object2, index=1)	Intersects any two objects (except points).Example G=point(intersect(D, E)) By default returns the first intersecting point, for second and third intersecting point, give 2 or 3 respectively. For example this intersect(D, E, 2) gives the second intersecting point.
reflect(object, line)	Reflects the object by a given line. Example:- reflect(D, A) where D is the label of point to reflect and A is the reflecting line

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rotate(object, angle, withrespectTo=point(0, 0))	Rotates the object by a given degree. By default, the rotation is with respect to origin (0, 0), which can be optionally overridden by giving the parameter withrespectPoint.
translate(object, x, y, withrespectTo=point(0, 0))	Translates the object by given x, y with respect to origin or by given withRespectTo parameter. translate(arc(2, 3, 3, 0, 180), 2, 3, point(2, 1)) or translate(G, 2, 4)
dilate(object, scaleFactor, withRespectTo=point(0, 0))	Dilates the object by a given scaleFactor parameter. dilate(point(3, 1), 2)
project(point1, line)	Projects the input point on the line and returns the projected point. Example:- project(A, line(0, 0, 1, 0)) projects the point A on the given line.
interpolate(point1, point2, ratio)	Example:- interpolate(A, B, 0.5) A ratio of 0.5 returns the midpoint of A, B
hide(comma separated labels)	Example:- hide(A, B, C, D) hides objects A, B, C, D. To show again use show(A, B, C, D)
group(comma separated objects)	Transformations can be applied on multiple objects simultaneously by creating a group. For example to rotate both a arc 'A' and a polygon 'B' together, use C=group(A, B) and then D=rotate(C, 120) where C is the label of the group. Groups can also be nested.

–अपना कार्य सुरक्षित करें-

- –फोटोग्राफ साभार–

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