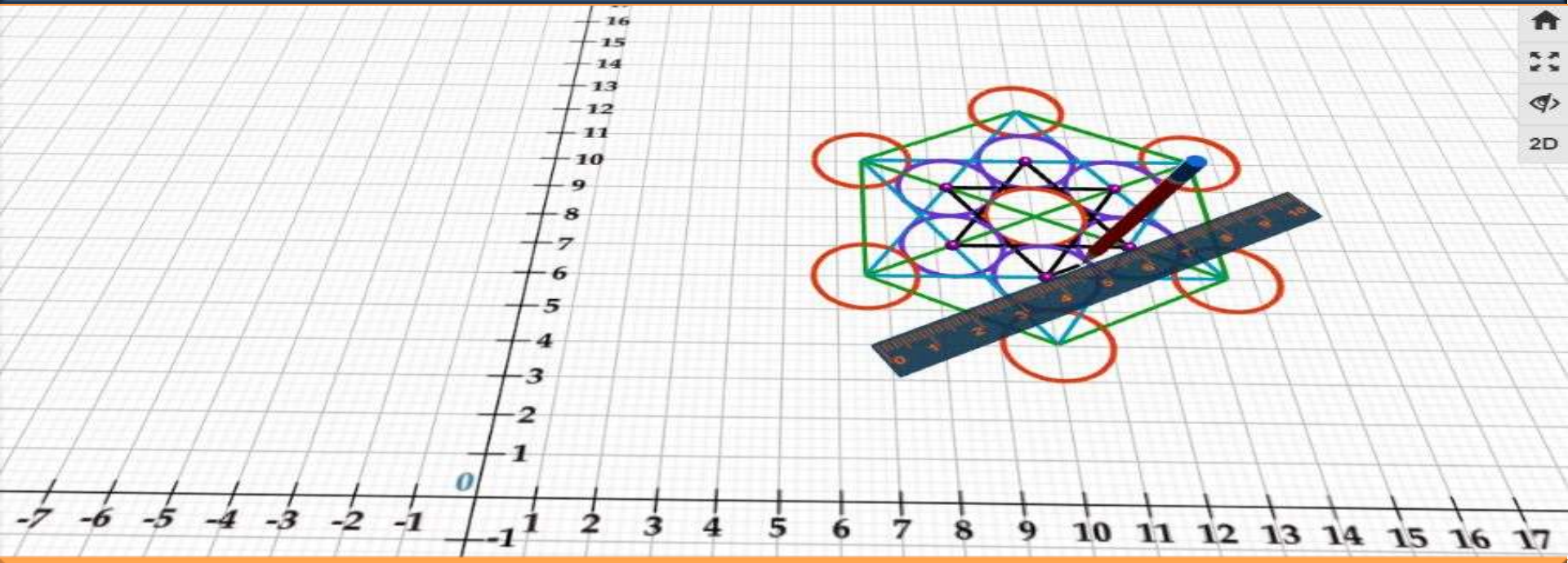
robocompass

USER GUIDE



Geometric Constructions Made Easy

Visit: http://www.robocompass.com

Contents

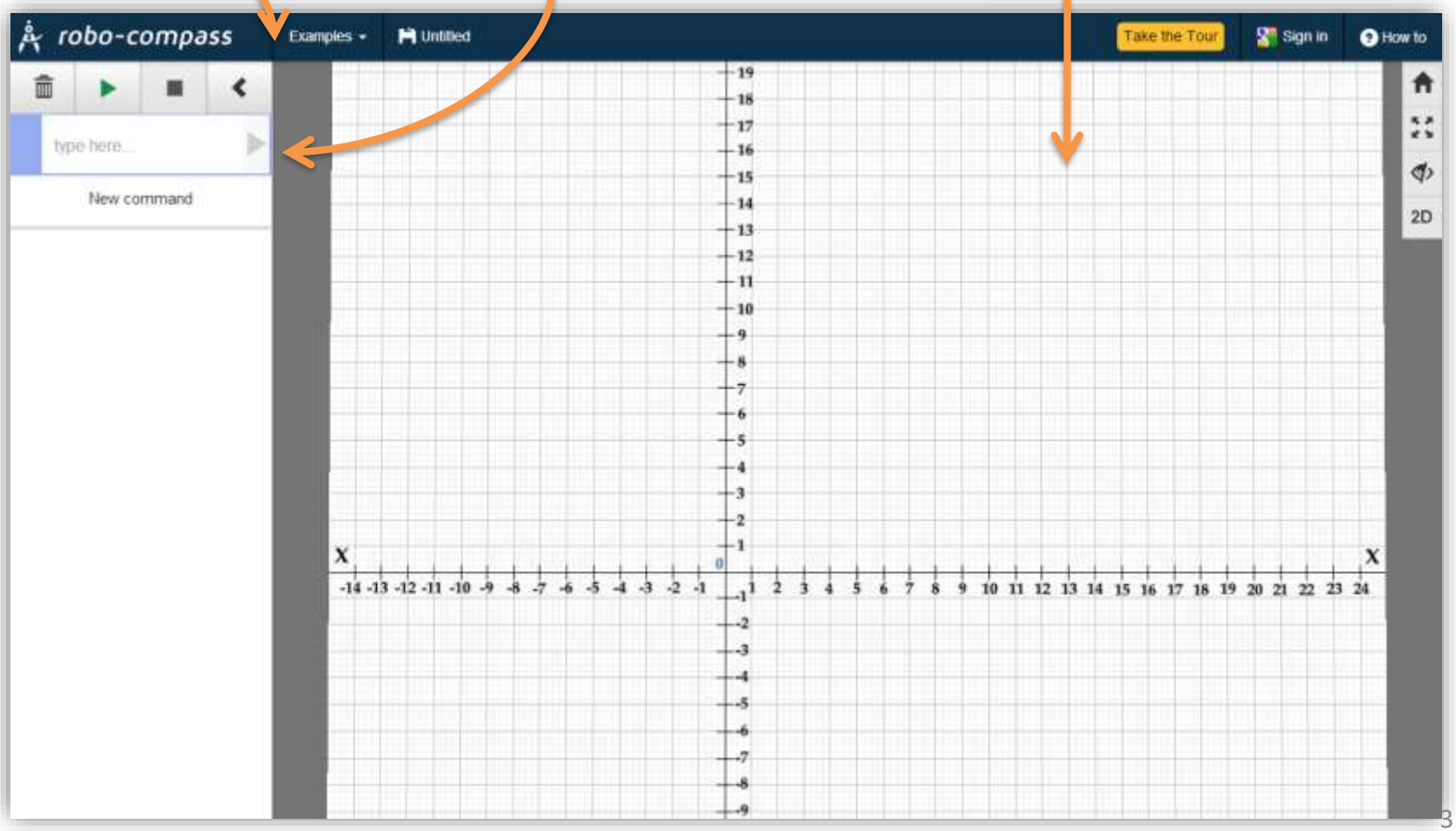
"Teach and learn geometry exactly as you would with a physical straightedge, compass, and protractor".

GETTING STARTED WITH ROBOCOMPASS

MENU BAR
Located at the top of the Application

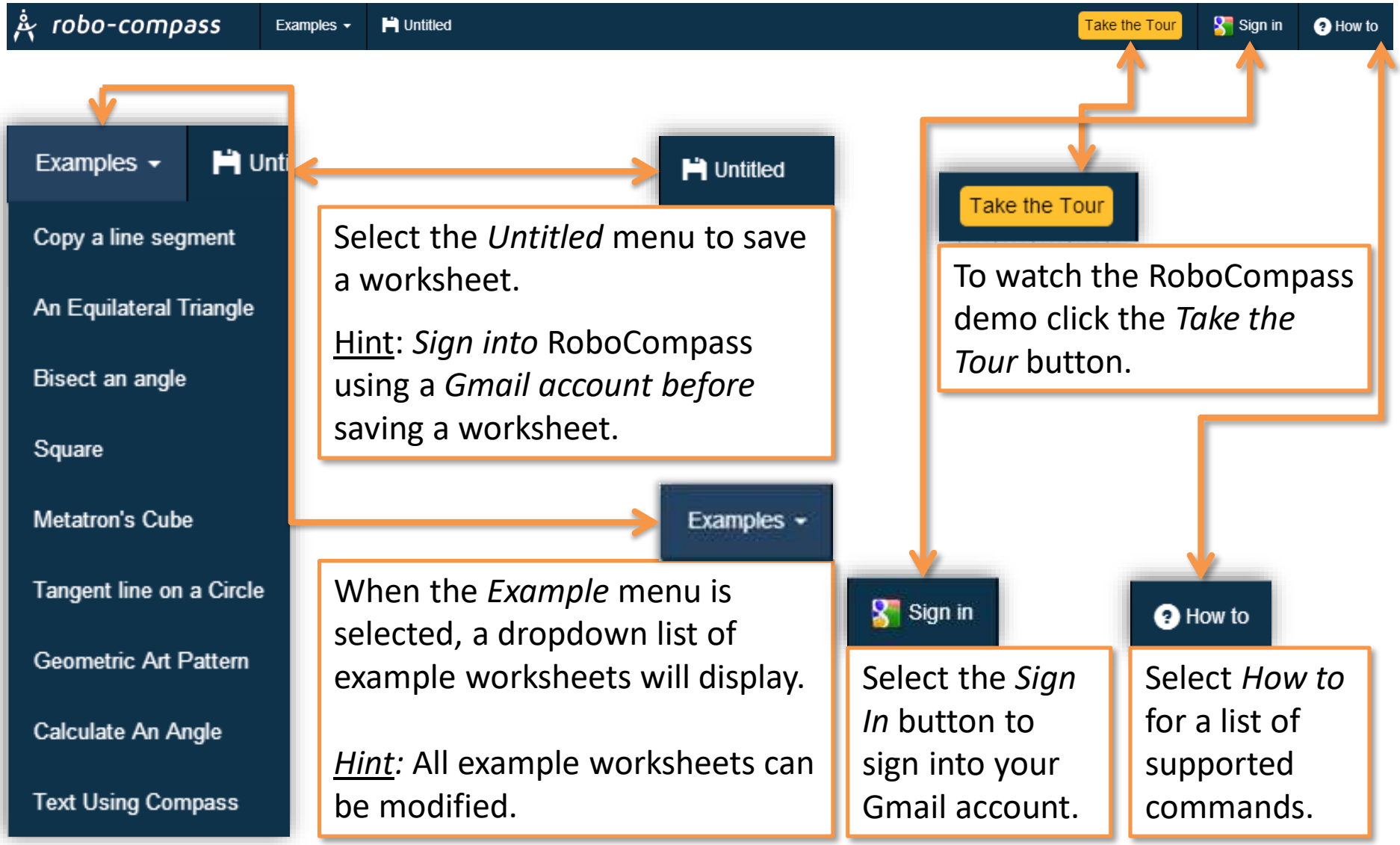
COMMAND EDITOR
Enter command or text to build a geometry construction.

PLAY SURFACE
Area where the geometry constructions is viewed or manipulated.

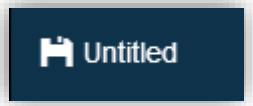


Visit: http://www.robocompass.com

Menu Bar

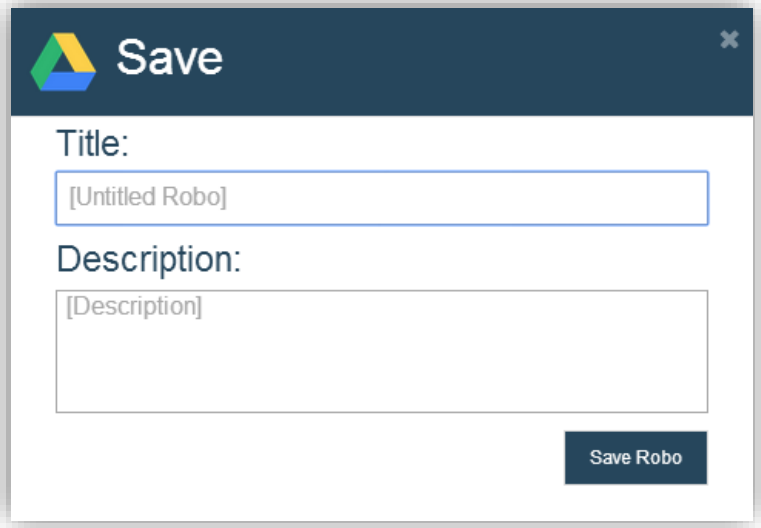

robo-compass
Examples
Untitled
Take the Tour
Sign in
How to
Examples
Unti
Copy a line segment
An Equilateral Triangle
Bisect an angle
Square
Metatron's Cube
Tangent line on a Circle
Geometric Art Pattern
Calculate An Angle
Text Using Compass
Untitled
Select the *Untitled* menu to save a worksheet.
Hint: *Sign into* RoboCompass using a *Gmail account before* saving a worksheet.
Take the Tour
To watch the RoboCompass demo click the *Take the Tour* button.
Examples
When the *Example* menu is selected, a dropdown list of example worksheets will display.
Hint: All example worksheets can be modified.
Sign in
Select the *Sign In* button to sign into your Gmail account.
How to
Select *How to* for a list of supported commands.

Google Drive Account Sign In



1. To save your work click the Untitled button. The *Save* dialogue box will open.

2. Type a title and description then click the *Save Robo* Button

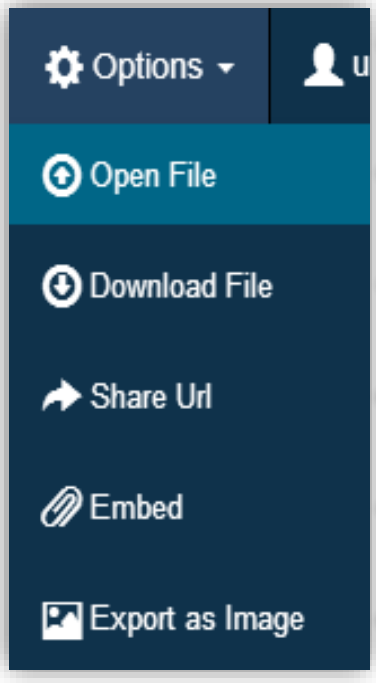


3. Worksheets are saved to Google Drive. Use Google Drive to easily share completed worksheets with groups or friends.

Visit: http://www.robocompass.com

Options and User Name Menus

After users sign-in, two additional menu items appear on the menu bar.



Options Menu: Dropdown menu for file management commands.

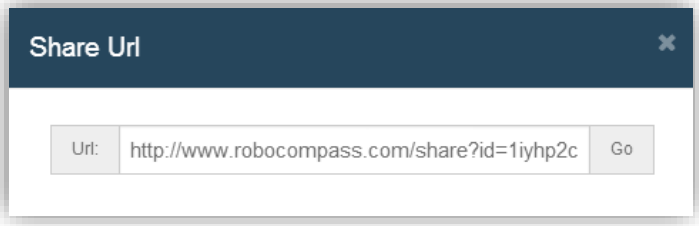
Open File: Open a saved RoboCompass file from the local drive.

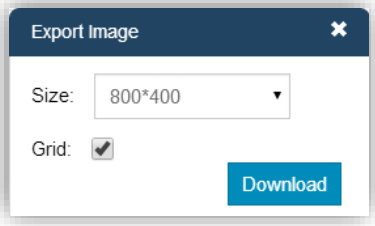
Download File: Download or save worksheets onto the local drive.

Share URL: Generate a link to a worksheet for easy sharing.

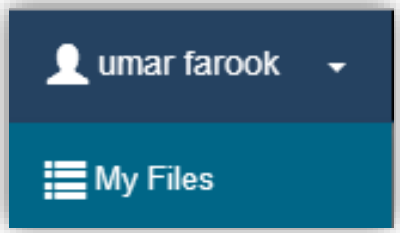
Embed: Embed worksheets with embed codes.

Export Image: Export a worksheet as an Image .

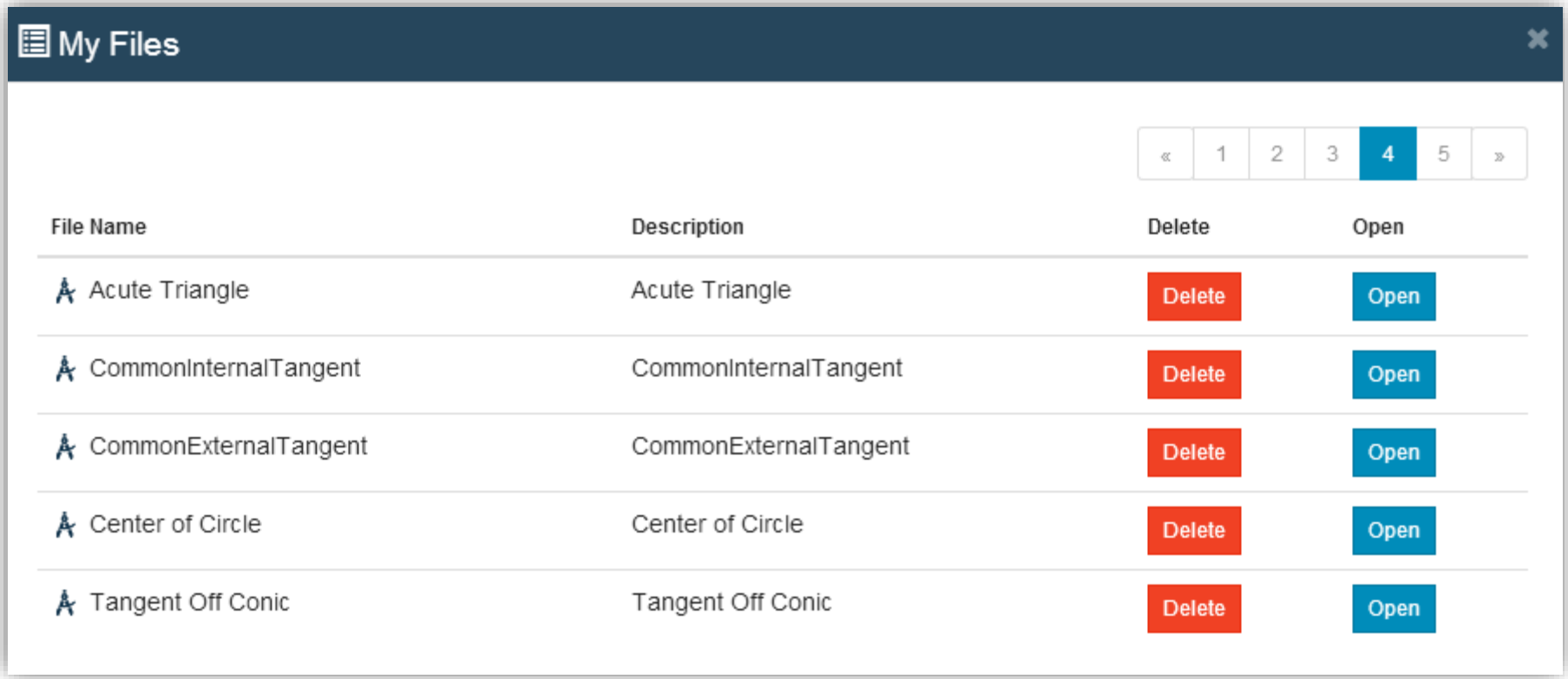




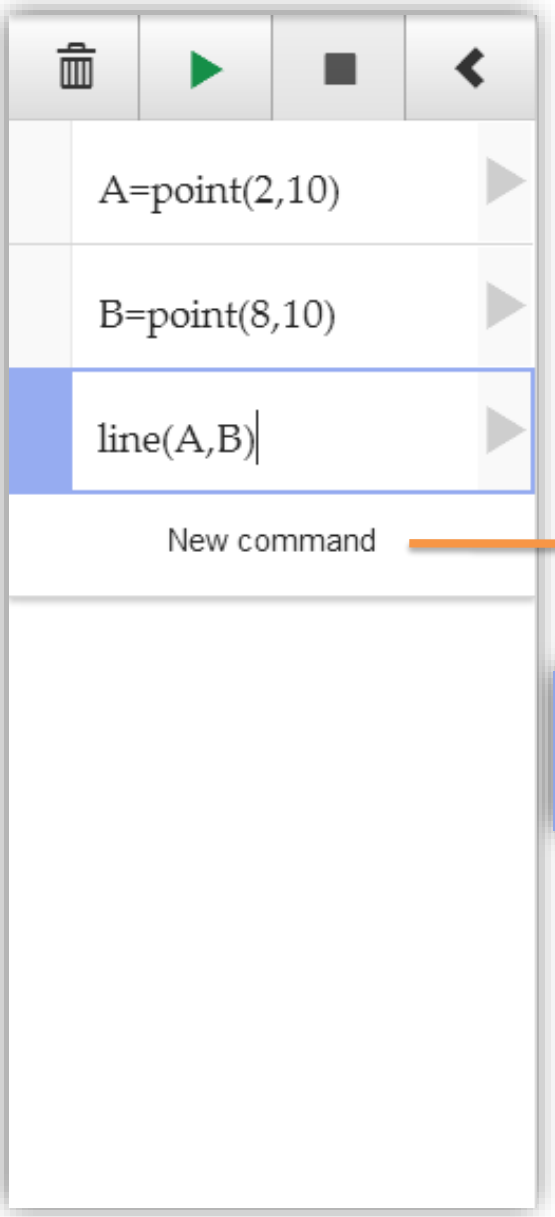
Options and User Name Menus



User Name Menu: When the user name is selected, the *My Files* dropdown menu displays. In the My Files dialogue box saved files can be deleted or opened.



COMMAND EDITOR



Delete All

Play All

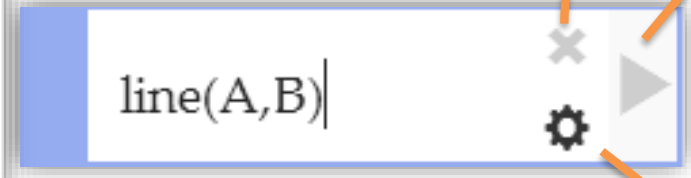
Stop

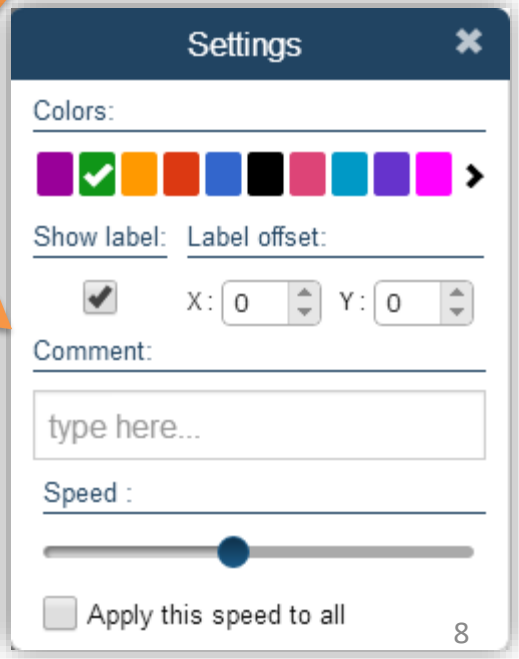
Hide Command Editor

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

Individual delete

Individual Play

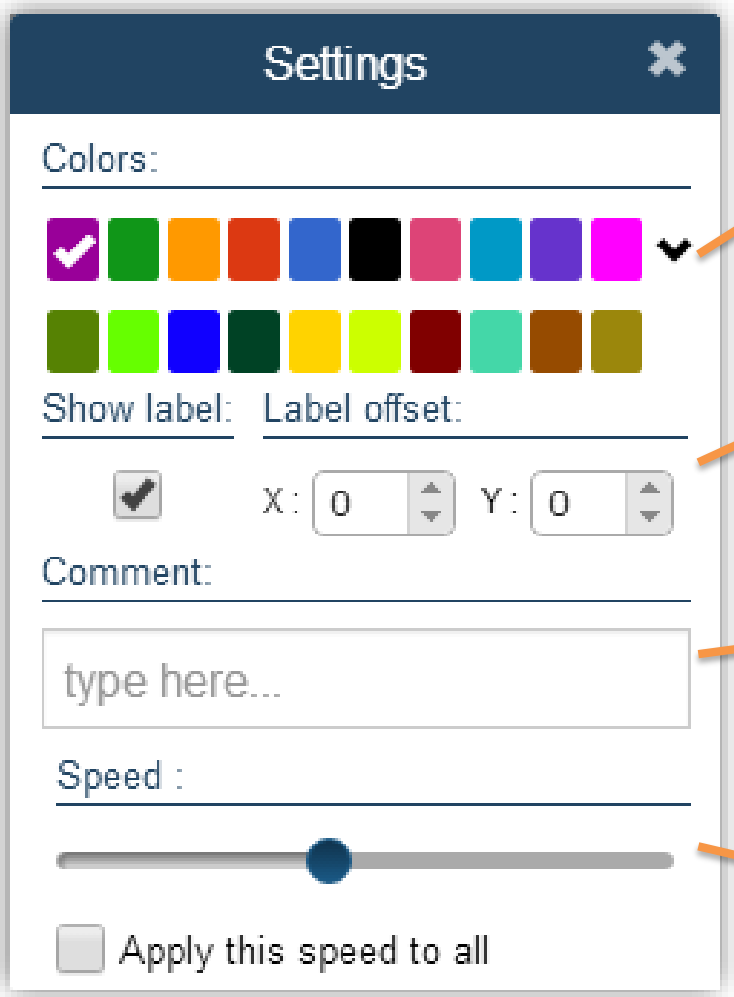




In the settings panel control options for:

- Play speed
- Color
- Label objects

COMMAND EDITOR – SETTINGS



Colors Panel: Change an object's color.

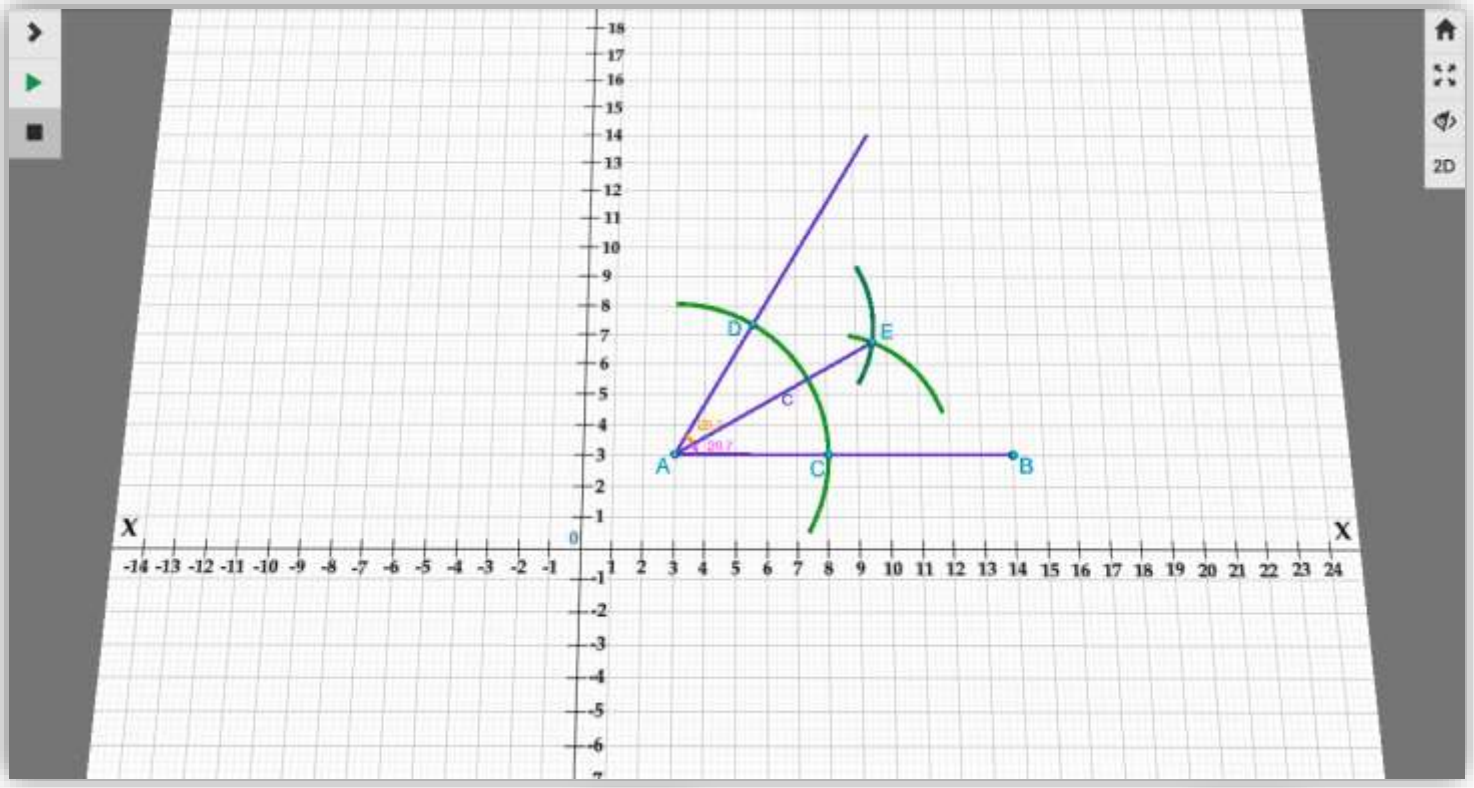
Show Label box: To hide a label, *uncheck*, the show label box.
To position labels use the stepper options X and Y.

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.

PLAY SURFACE

Play Surface: 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

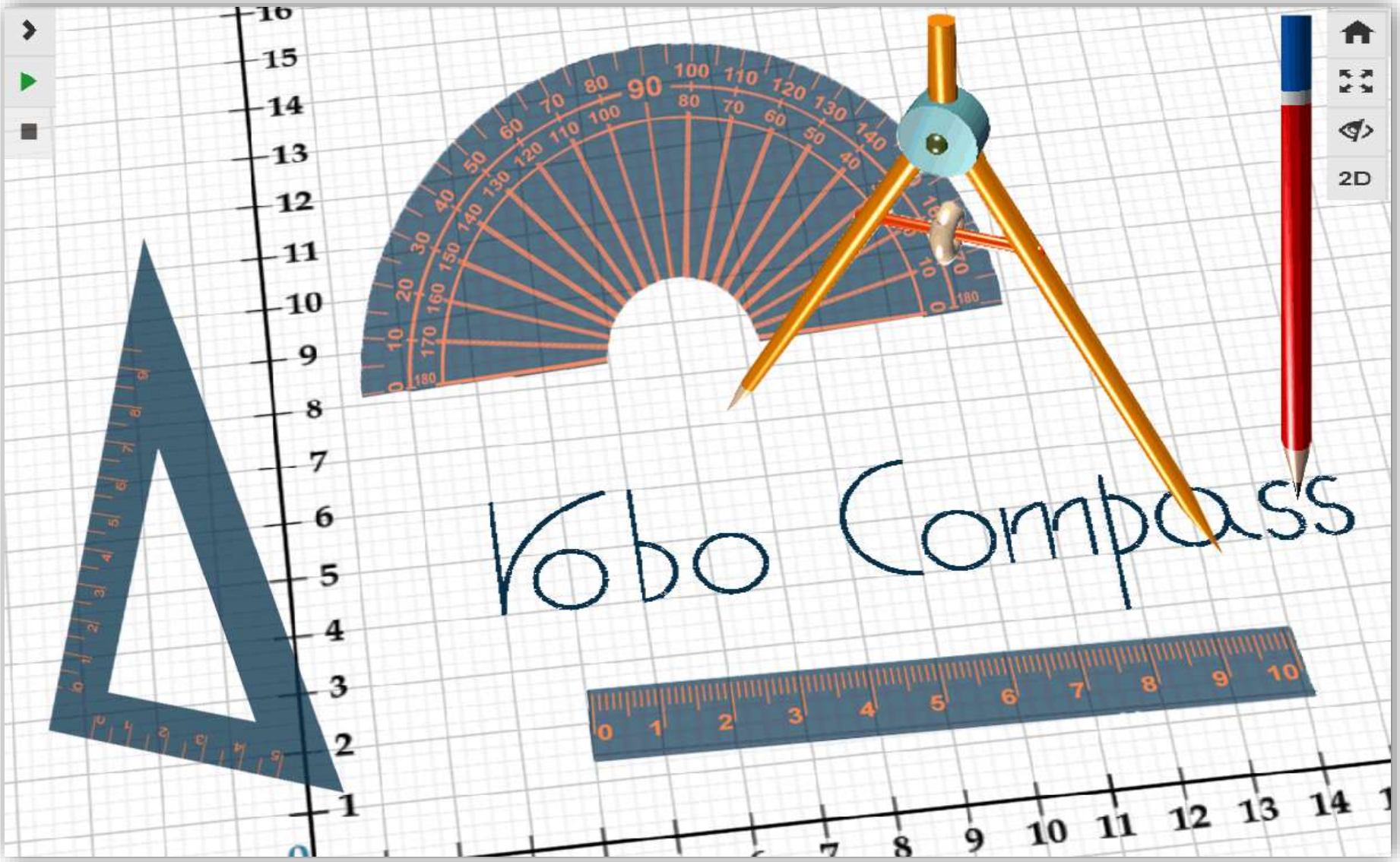
2D

2D/3D View

Reset View

Hide Grid/ Show Grid

ROBO GEOMETRY INSTRUMENTS



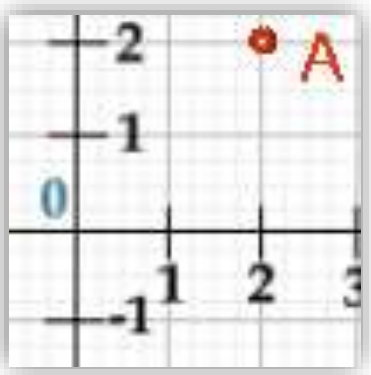
Visit: http://www.robocompass.com

Supported Commands

point(x,y)

point(0,0)

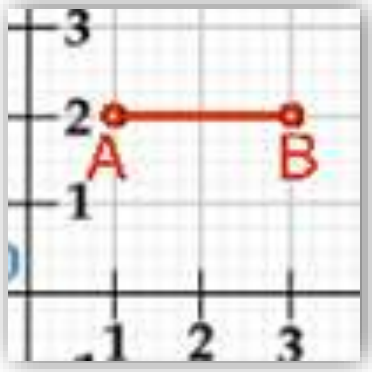
A=point(2,2)



line(x1,y1,x2,y2)

line(0,0,2,3)

line(A,B)

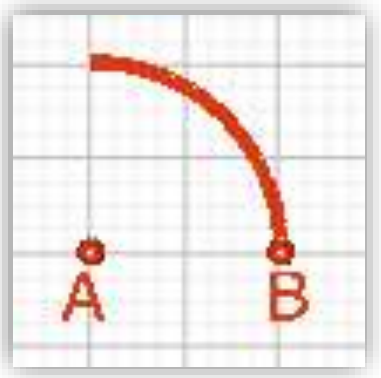


Supported Commands

arc(originPoint, radius, angleFrom, upto)

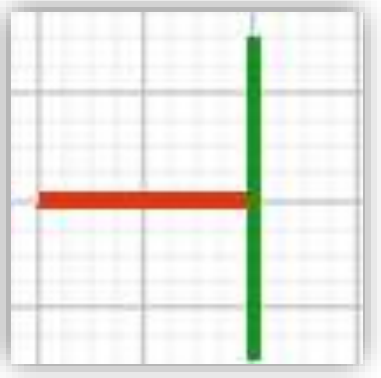
arc(point(2,2),3,0,360)

arc(A,B,A, 0,90)

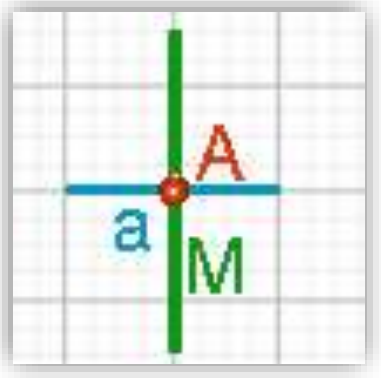


perp(line, passThroughPoint, length=10)

perp(line(1,2,3,2),point(3,2))



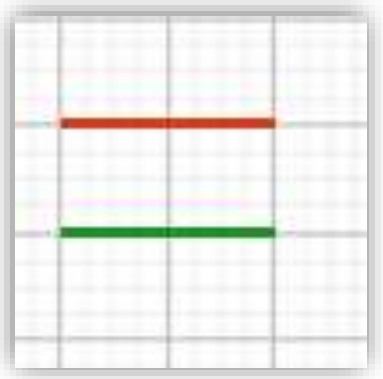
M=perp(a, A)



Supported Commands

parallel(line, passThroughPoint, length=10)

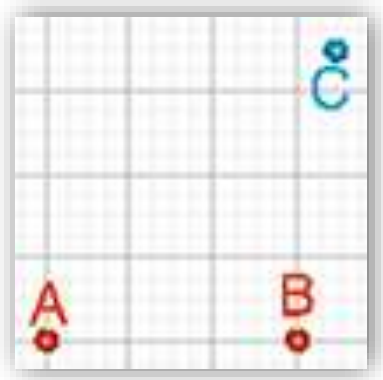
parallel(line(2,3,4,3),point(3,2))



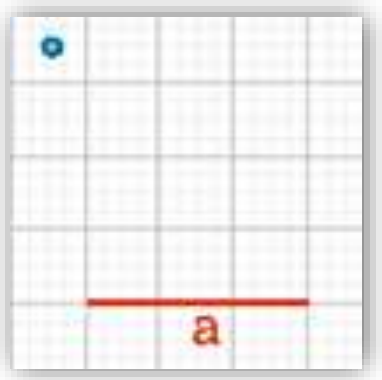
M=parallel(a, A)

angle(point1, point2, degrees)

C=angle(A,B,45)



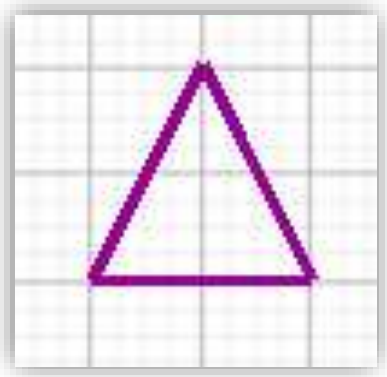
angle(a,45,1)



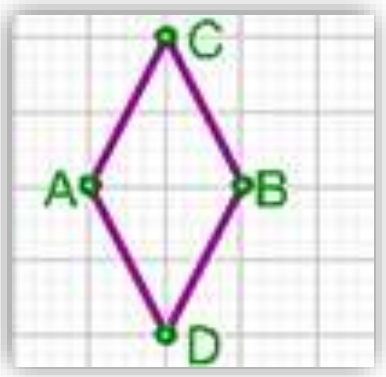
Supported Commands

polygon(comma separated points)

polygon(point(2,2),point(4,2),point(3,4))

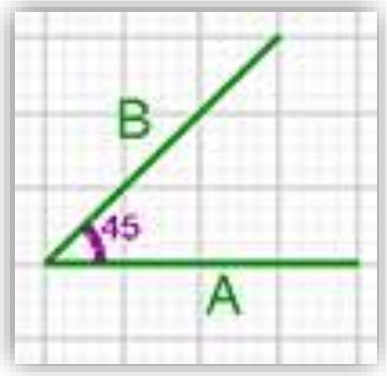


M=polygon(A,B,C,D)

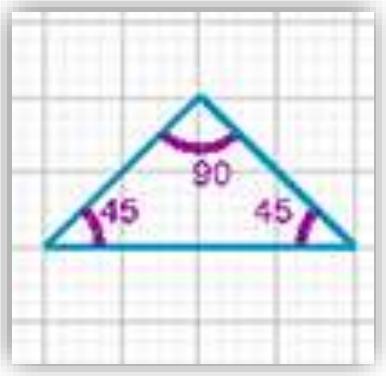


findangle(2 lines or a polygon)

findangle(A,B)



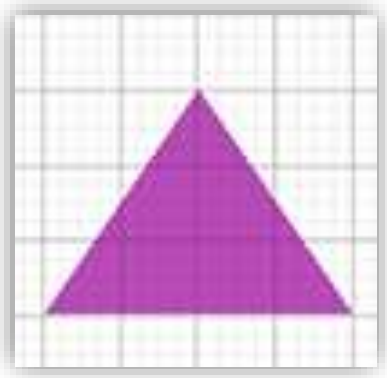
findangle(C)



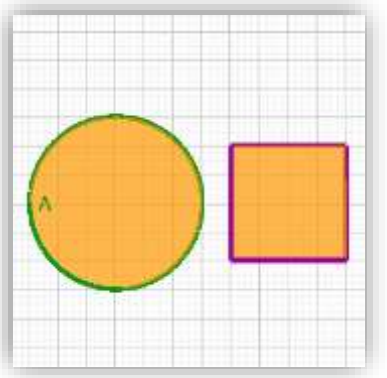
SUPPORTED COMMANDS

fill(A, B, fillType=0, output=1)

fill(polygon(2,2,6,2,4,5))

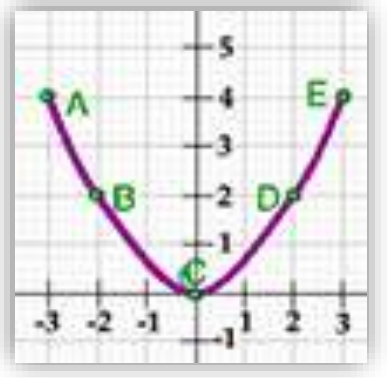


fill(A,B)

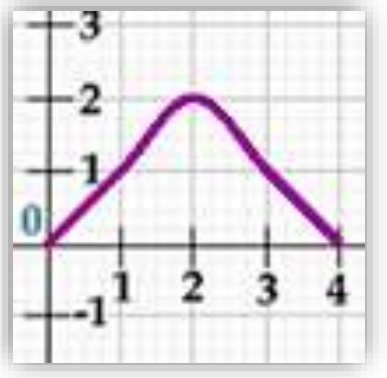


trace(comma separated points)

trace(A,B,C,D,E)



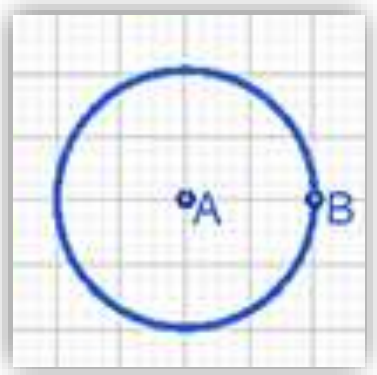
trace(point(0,0),point(1,1),point(2,2),point(3,1),point(4,0))



Supported Commands

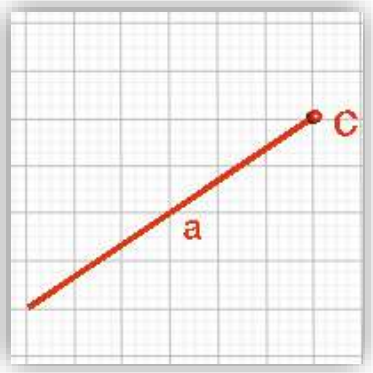
dist(point1, point2)

arc(A, dist(A,B),0,360)

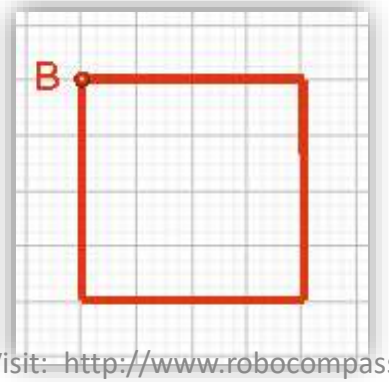


pos(polygon or line or arc, index)

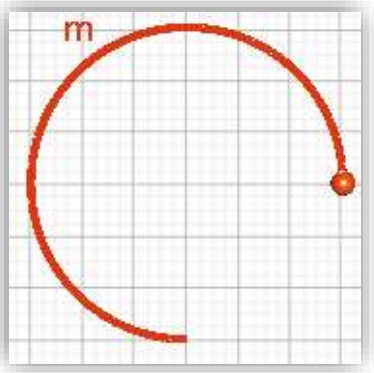
C=point(pos(a,2))



B=point(pos(A,4))



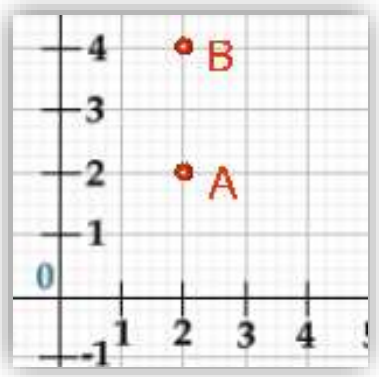
point(pos(m,2))



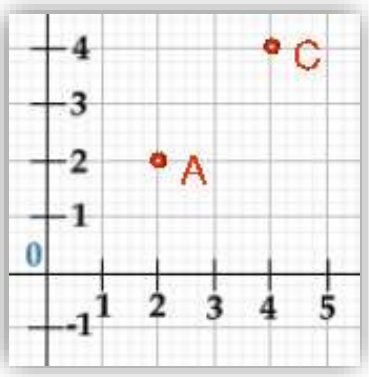
Supported Commands

X(point) **Y(point)**

B=point(X(A), 4)

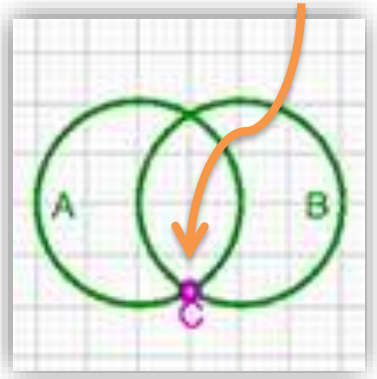


C=point(X(A)+2, Y(A)+2)

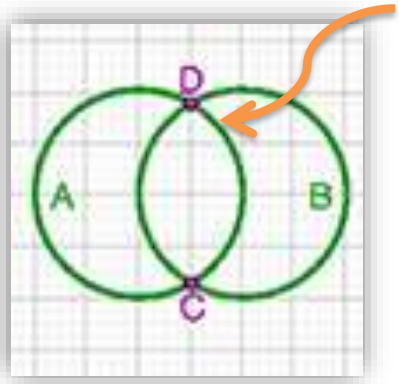


intersect(object1, object2,index=1)

C=point(intersect(A,B))



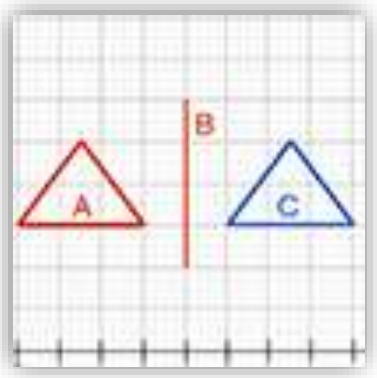
D=point(intersect(A,B,2))



Supported Commands

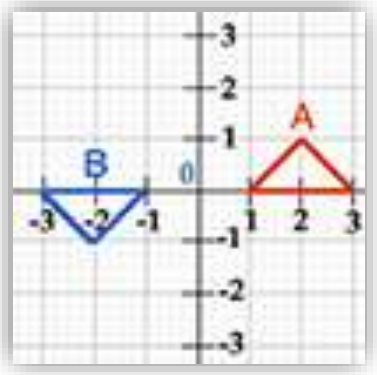
reflect(object, line)

C=reflect(A,B)



rotate(object, angle, withrespectTo = point (0,0))

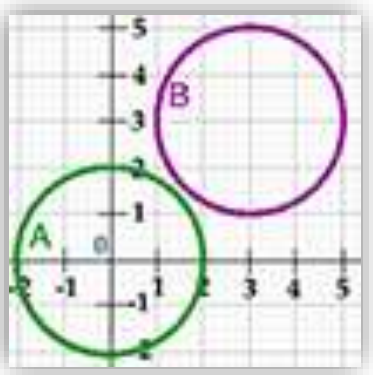
B=rotate(A,180)



Supported Commands

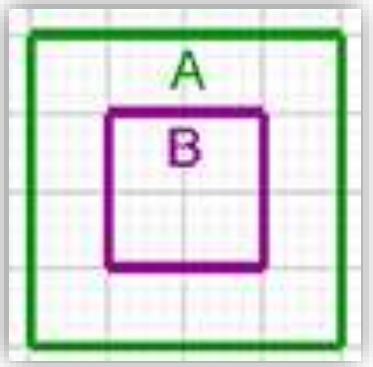
translate(object, x, y, withrespectTo = point(0,0))

B=translate(A,3,3)

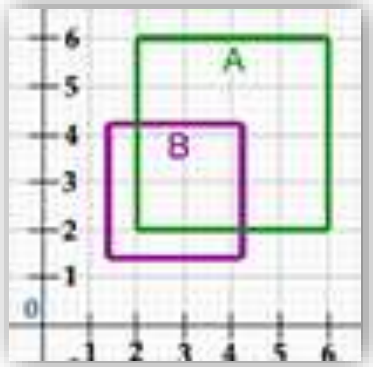


dilate(object, scaleFactor, withRespectTo = point(0,0))

B=dilate(A,0.5,point(4,4))



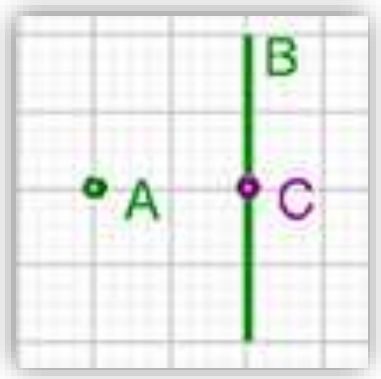
B=dilate(A,0.7)



Supported Commands

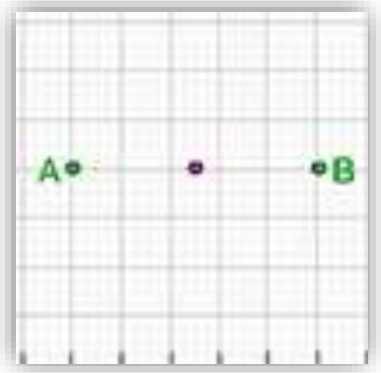
project(point1,line)

C=point(project(A,B))

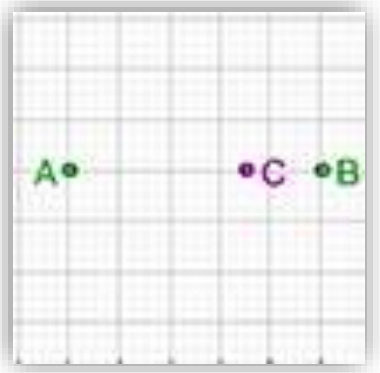


interpolate(point1, point2, ratio)

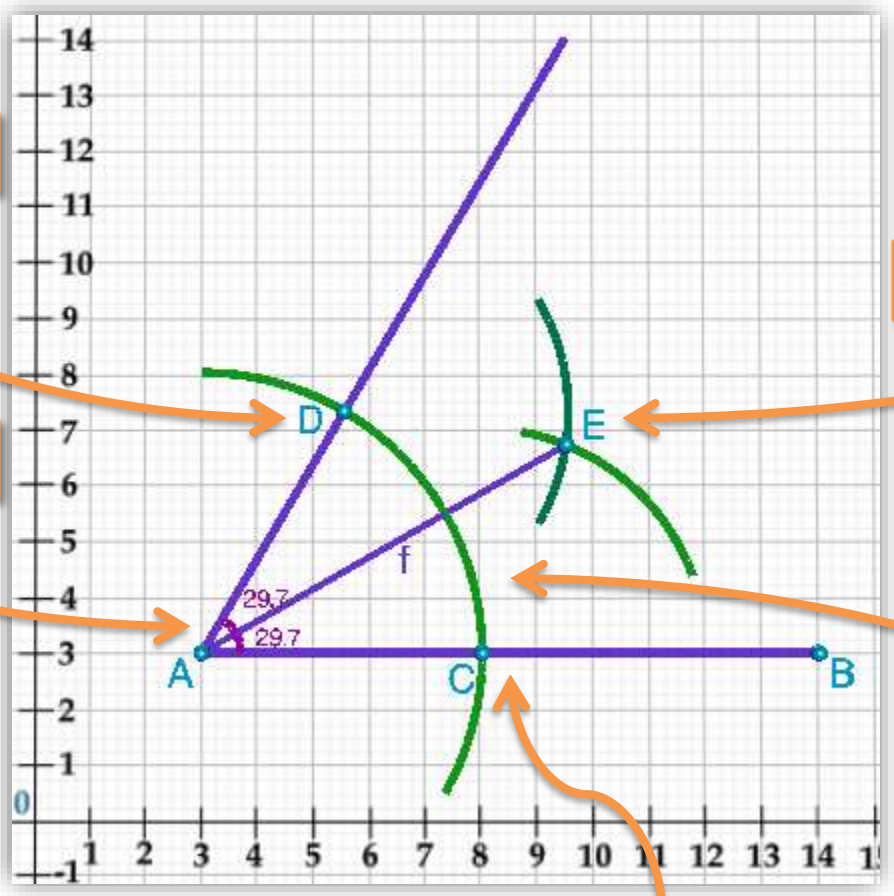
point(interpolate(A,B,0.5))



C=point(interpolate(A,B,0.7))



Example: Angle Bisector



D=point(intersect(b, c))

E=point(intersect(d, e))

findangle(b, d)

c=arc(A,5,330,120)

C=point(intersect(a, c))

*Note: The simple commands for points and lines are not shown in this example.

Thank You For Using RoboCompass!

- Free sign-up: *https://www.robocompass.com*
- Facebook: *https://www.facebook.com/robocompass.org*
- Twitter: *https://twitter.com/robocompass*
- YouTube: *https://www.youtube.com/robocompass*