Introduction to TinkerCad 3D Modelling Software
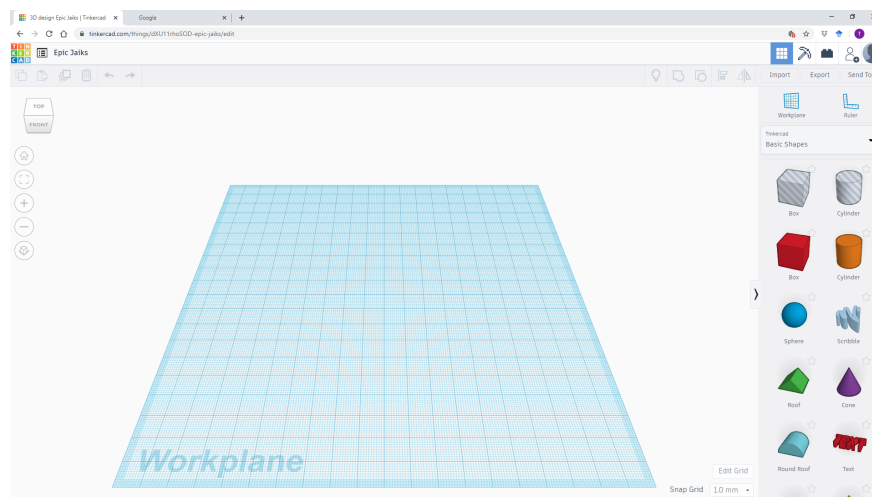
Introduction

TinkerCad is a free in-browser 3D modelling program found at `https://www.tinkercad.com/` - you will need an email address to register. The first time you log in to your account it will provide a tutorial of features for you to work through. This will show you the basic controls for the program.

Once completed you will be able to go to the project page where you can take a look at some example designs if you wish.
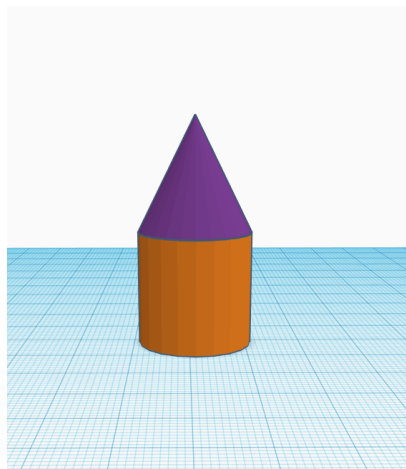
You need to then click on your profile picture in the top right to open the drop-down menu and select "+ new" to load up your first project:

We can select shapes from the list on the right and drag them onto our stage to create new shapes and designs.

Let's start by making a pencil.

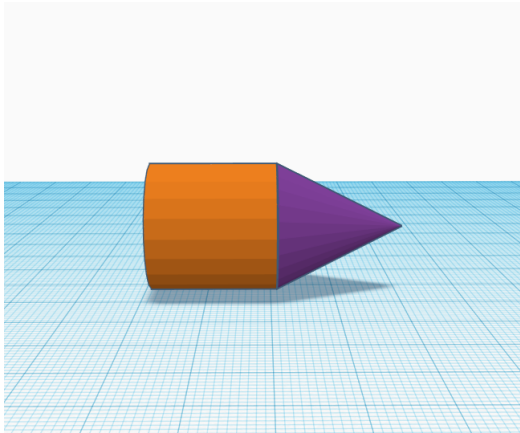1. Try to recreate the model below:

Hints:

This will involve 'lifting' the cone onto the top of the cylinder.

To do this select the cone shape by left clicking, then click and hold on the black pointer above the cone and move the cone upwards until you have it at the right height – which is 20mm.

Then you can move the cone into position on top of the cylinder

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2. Now to rotate and re-position it to match below:
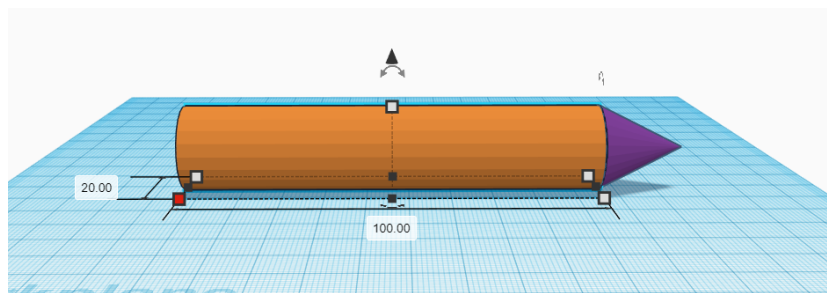

Hints:

You can click and drag a selection box over both shapes to select them and then move them together.

To rotate once the shapes are selected click on the double ended curved arrow above it and drag the direction you want 90 degrees.

Then lower the whole object back to a height of 0.

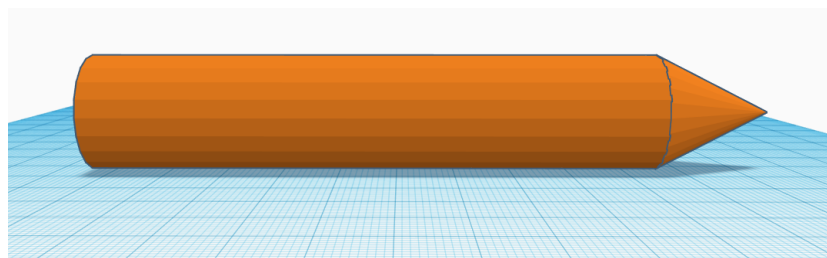3. Now make it into a pencil shape:

Hints:

You only want to select the cylinder section.

You can stretch the shape or for more accuracy you can click on the red box shown in the image to make the length value appear and then click on the value and alter it manually to 100.

4. A pencil is a single object so now to merge the two shapes to produce this:
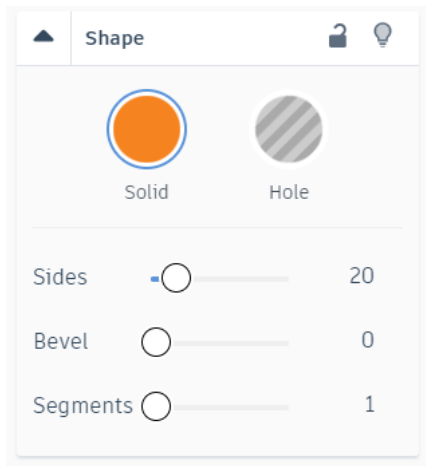

Hints:

You will need to select both objects. Then select the merger option on the top bar or press ctrl+G.

5. If you look closely at our new shape you will see the cylinder and the cone do not line up smoothly. So, we need to undo the merging and correct the join.

Hints:

There is an undo arrow on the top toolbar or you can press Ctrl+Z. You will know the objects are separated because they will go back to being two different colours.

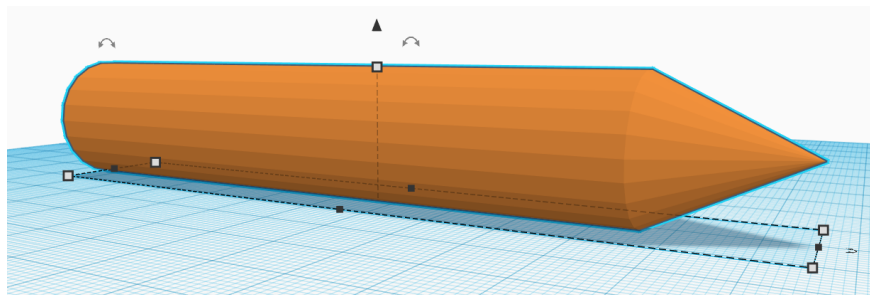Click on the cylinder to view its details:

This shows the cylinder has 20 sides

Now load up the same information for the cone

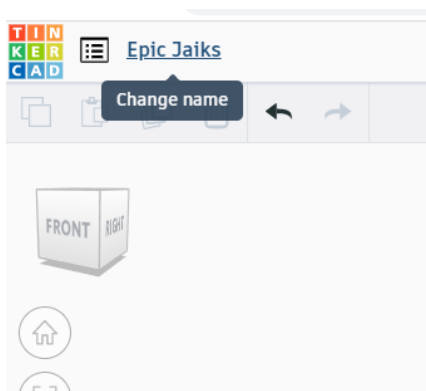How many sides does the cone have?

Use the slider to change the number of sides for both shapes to 22 sides

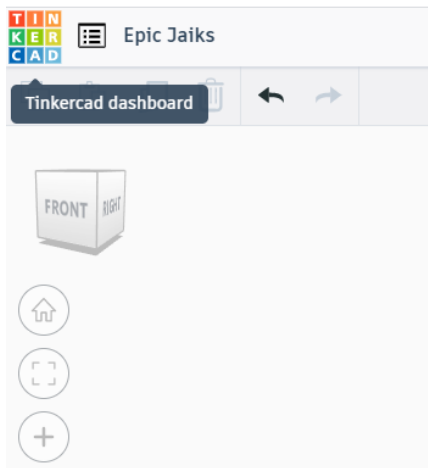Now merge the two shapes again to create the model below:

See how the two shapes have merged more smoothly than before.

You can now change the name of this design to 'pencil'

Well Done! You have now completed your first design.

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Now to exit this design you need to click on the TinkerCAD dashboard icon:

This will take you to your account where you can view all your designs.

Now click on 'create new design' to load up a new empty project.