

Fusion 360 Academy

Week 2

Challenge 1

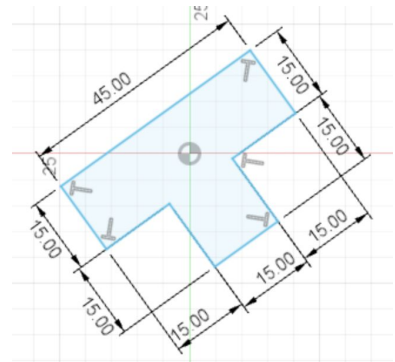
Following the steps below identify the error. Why is this an error and **how do you fix it?**

- Draw a straight vertical line. Make it 20 units long using the dimension tool (line 1)
- Draw a horizontal line from the the top vertice of line 1 going right. Make it 15 units long with the dimension tool (line 2)
- Use the **perpendicular** constraint tool on line 1 and line 2.
- Draw a line 30 units long connecting the 2 unconnected vertices of line 1 and line 2.

Tip: read **Advanced Sketching** (handbook page 8-10)

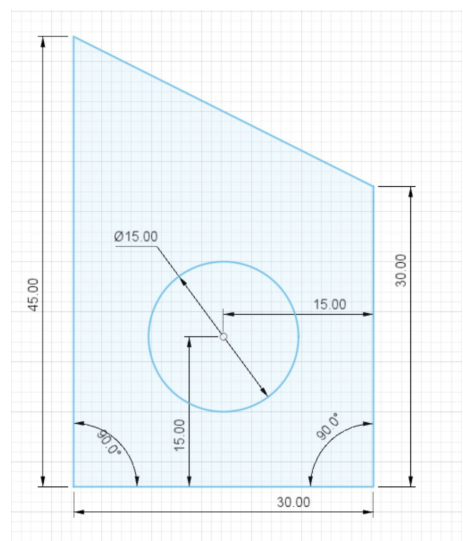
Challenge 2

Draw 8 lines joined together to form a closed loop. Using the dimension tool to set the length of each line and the perpendicular tool to set the angles create the sketch shown to the right. Make the sketch at an angle like shown, ie the lines should not line up with the grid.



Challenge 3

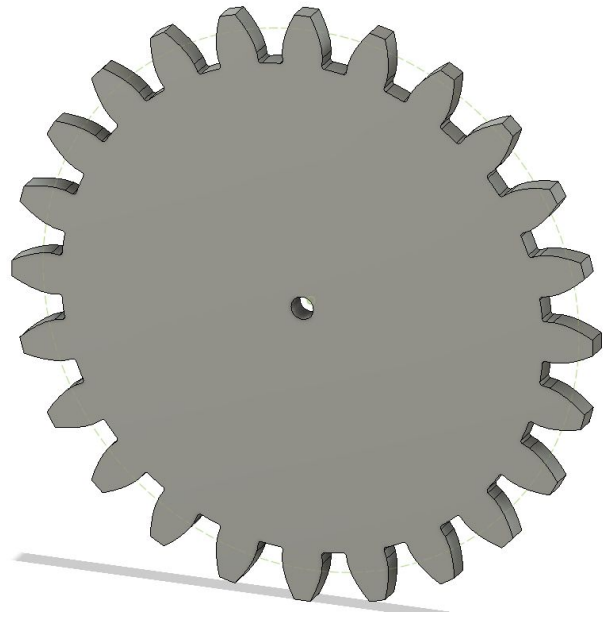
Make exactly this shape but use the dimension tool only **once**. Changing the value of the one dimension given should scale the sketch up and down but not change any dimension relative to any other.



Challenge 4

Using the **SpurGear** add-in to create a spur gear with any dimensions.

Tip: Read **add-ins** (page 11-12)



Challenge 5

Make a **30mm²** & **20mm²** cuboid & make both individual components. Then join them with the smaller one on top of the bigger one.

Tips:

- Start by making two individual cuboids of the above dimensions
- Read **assembly** (page 12-13)
- Make each a component
- Join them on the center point of each of their faces

