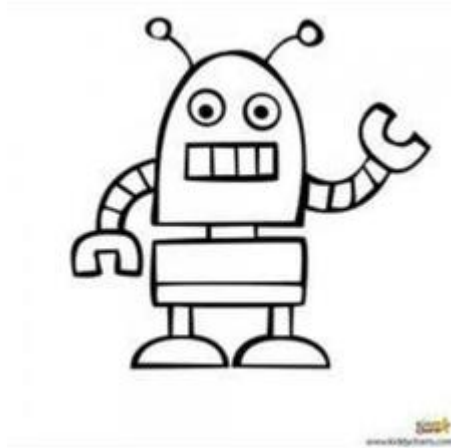


Chapel Hill Math Circle

Beginners' Group

GeoRobot¹ April 15, 2017



GeoRobot is a robot that can help you draw geometric figures. However, GeoRobot only understands eight basic instructions. Use those instructions to help him (?) draw the shapes described below.

GeoRobot can:

1. Make points.
2. Make a line through any two points.
3. Mark points on any line.
4. Draw a perpendicular line to any line at a given point.
5. Place a ruler on any line with a zero at given point.
6. Mark a point on a line which corresponds to a number on a ruler.
7. Reverse the direction of a ruler.
8. Measure the distance between two points.

Write down instructions for GeoRobot to draw:

1. A square.
2. A rectangle which is not a square.
3. A rhombus which is not a square.
4. A parallelogram which is not a rectangle or a rhombus.
5. Think of more tasks that a robot can do.

¹ Based on a workshop led by Dr. Irina Kogan at NCSU on April 1, 2017 for the Triangle Math Teachers' Circle.

² Image taken from <http://pad1.whstatic.com/images/thumb/9/9a/User-Completed-Image-Draw-a-Robot-2016.08.03-10.10.24.0.png/-crop-225-225-126px-User-Completed-Image-Draw-a-Robot-2016.08.03-10.10.24.0.png>