1. Given points \((a, b)\) and \((c, d)\) in the plane, give MATLAB code for

(a) the distance between them

(b) the angle going from \((a, b)\) to \((c, d)\)

\[
\text{pdist( } [ [a \ b] ; [c \ d] ] \text{ )} \\
\text{atan2d( } d-b, c-a \text{ )}
\]

2. Give MATLAB code that will generate the plot below (where all line-segments have the same length and are either horizontal or vertical).

\[
\begin{array}{c}
\text{points = } [ 0 \ 0; 1 \ 0; 1 \ 1; 2 \ 1; 2 \ 0; 3 \ 0 ]; \\
\text{plot( } \text{points(:,1), points(:,2) } \text{ );}
\end{array}
\]