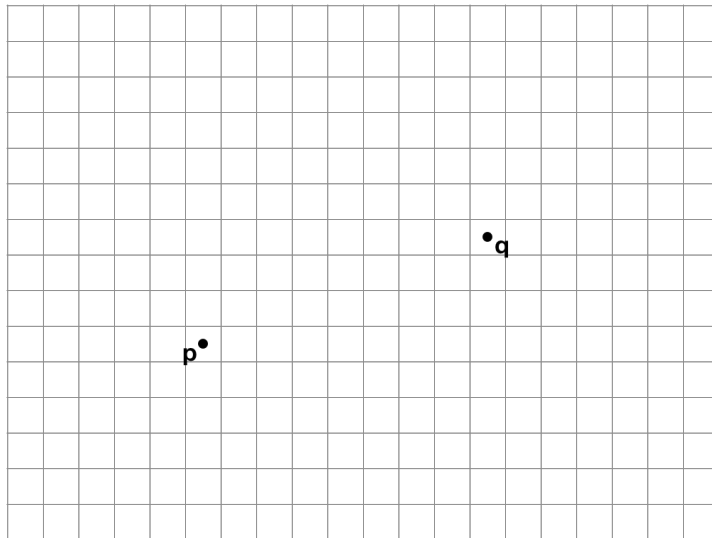


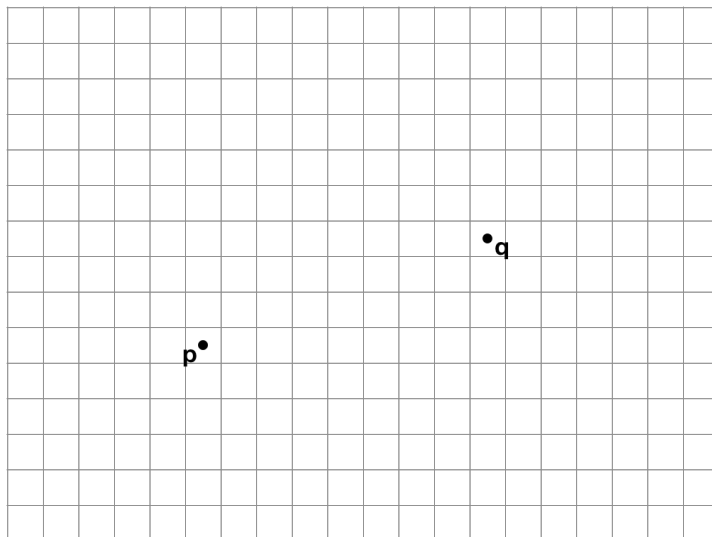
CSCI 480 / 580 – February 21, 2020 – Line Drawing

1. Color pixels in the grid below to form a line between the two points **p** and **q**



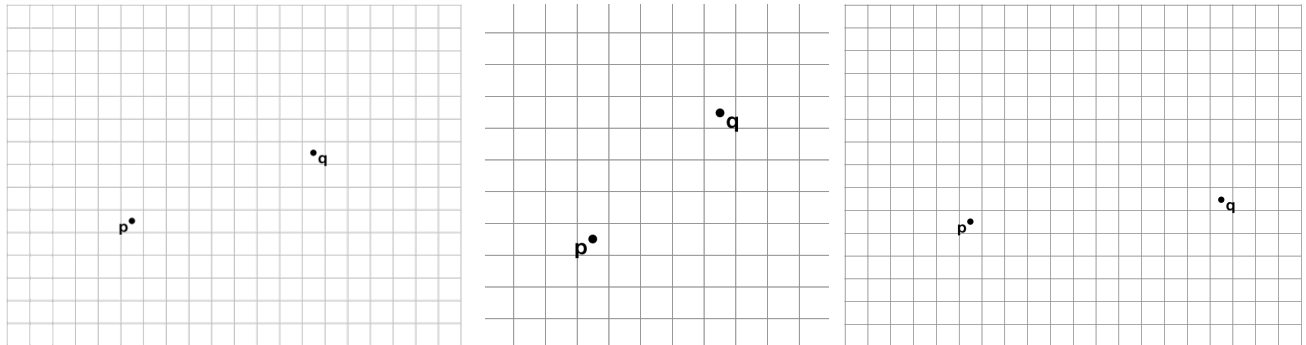
CSCI 480 / 580 – February 21, 2020 – Line Drawing

1. Color pixels in the grid below to form a line between the two points **p** and **q**



2. Let $\mathbf{p} = (px, py)$ and $\mathbf{q} = (qx, qy)$. For now, we'll make some assumptions:
- The slope of the line is between 0 and 1 (i.e., it's between 0 and 45 degrees)
 - px, py, qx, qy are integer coordinates

See if you can come up with an algorithm to draw a line between the points \mathbf{p} and \mathbf{q} . Use the figures below to test/develop your algorithm on a few different cases.



2. Let $\mathbf{p} = (px, py)$ and $\mathbf{q} = (qx, qy)$. For now, we'll make some assumptions:
- The slope of the line is between 0 and 1 (i.e., it's between 0 and 45 degrees)
 - px, py, qx, qy are integer coordinates

See if you can come up with an algorithm (no code necessary – just a clear description of the algorithm is fine) to draw a line between the points \mathbf{p} and \mathbf{q} . Use the figures below to test/develop your algorithm on a few different cases.

