Transformation Rule Sheet

Translations:

$(x, y) \rightarrow (x + a, y + b)$

Reflections:

$R_x (x, y) \rightarrow (x, -y)$

$R_y (x, y) \rightarrow (-x, y)$

$R_{y=x} (x, y) \rightarrow (y, x)$

$R_{y=-x} (x, y) \rightarrow (-y, -x)$

Rotations:

$R_{90}^o (x, y) \rightarrow (-y, x)$

$R_{180}^o (x, y) \rightarrow (-x, -y)$

$R_{270}^o (x, y) \rightarrow (y, -x)$

$R_{-90}^o (x, y) \rightarrow (y, -x)$

Dilations:

$(x, y) \rightarrow (kx, ky)$

- k is the scale factor
- Enlargement: $k > 1$
- Reduction: $0 < k < 1$