7C Enlargements
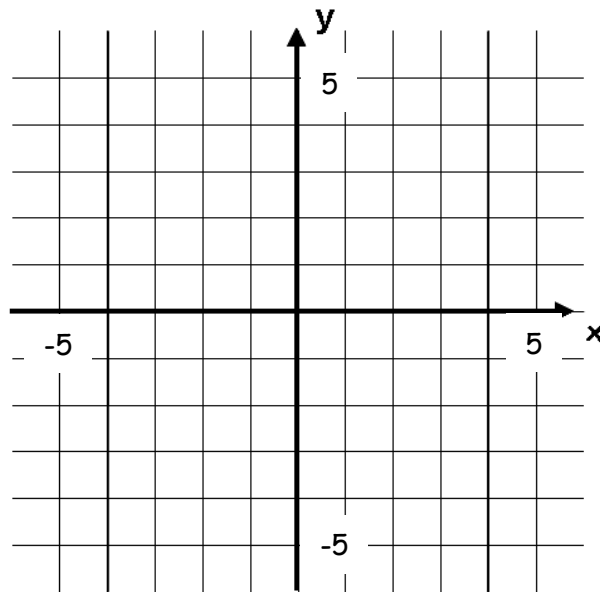
1. The matrix $M = \begin{bmatrix} 3 & 0 \\ 0 & 2 \end{bmatrix}$.

a) Find the image T' of the triangle T with vertices (1,1), (1,2) and (2,2) under the transformation represented by M.

b) Sketch T and T' on the same set of coordinate axes.

c) Describe geometrically the transformation represented by M.

Key note:

The determinant and scale factors:

2. The Matrix $M = \begin{bmatrix} 2 & 0 \\ 0 & 4 \end{bmatrix}$.
a) Describe fully the transformation represented by matrix M

b) A triangle T has vertices at (1,0), (4,0) and (4,2). Find the area of the triangle

c) Triangle T is transformed by using matrix M. Find the area of the image of T.