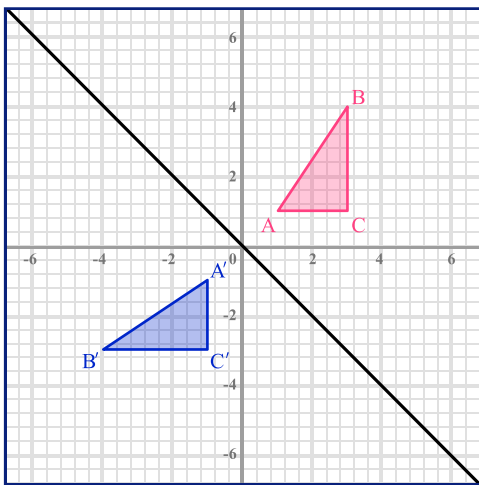


Methods in Geometry (Higher)

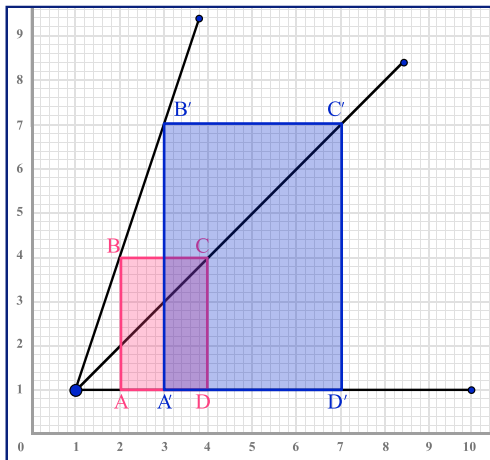
Reflections

Reflect triangle ABC in the line $y = -x$.



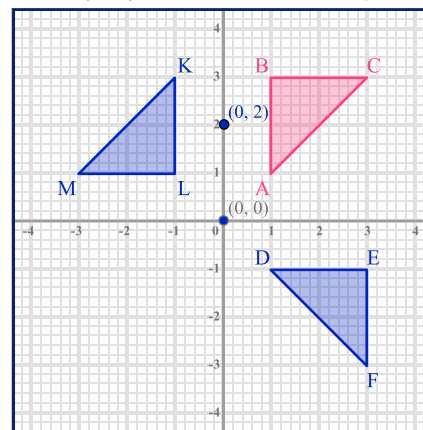
Enlargements

Enlarge rectangle ABCD by a scale factor of 2 about the point (1, 1).



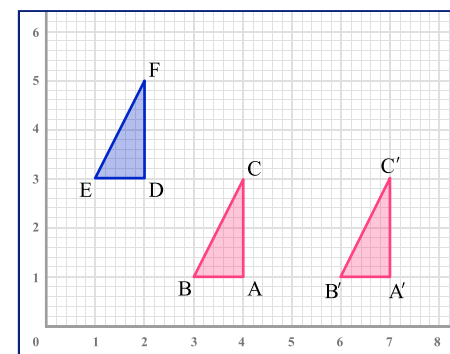
Rotations

- Rotate triangle ABC 90° clockwise about the origin, and label the image DEF.
- Rotate triangle ABC 180° about the point (0, 2), and label the image KLM.



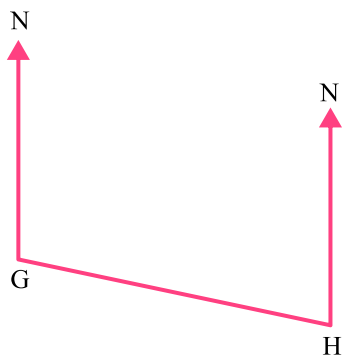
Translations

- Describe the transformation from ABC to A'B'C'.
= Translation, $\begin{bmatrix} 3 \\ 0 \end{bmatrix}$
- Draw the image when ABC is translated to DEF by the vector $\begin{bmatrix} -2 \\ 2 \end{bmatrix}$.



Bearings

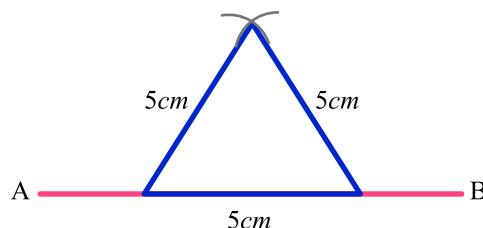
The bearing of H from G is 108°. What is the bearing of G from H?



$$= 288^\circ$$

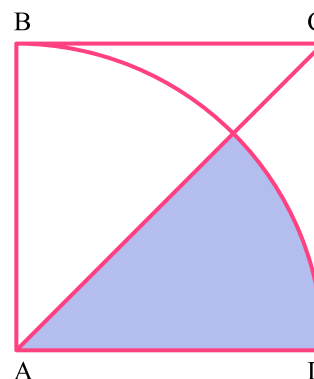
Constructions

Using a straight edge and compasses to construct an equilateral triangle of side length 5cm, the base of which sits on line AB.



Loci

Square ABCD has side length w units. Shade the region inside the square that is closer to AD than AB, and less than w units from A.



Vectors

OAB forms a triangle with $\vec{OA} = \underline{a}$ and $\vec{OB} = \underline{b}$.

- Express \vec{AB} in terms of \underline{a} and \underline{b} .
 $\vec{AB} = \underline{b} - \underline{a}$
- Given that P is the point such that $AP : PB = 3 : 1$, express \vec{OP} in terms of \underline{a} and \underline{b} .
 $\vec{OP} = \frac{1}{4}(3\underline{b} + \underline{a})$

