

Year 11 Mathematics Learning Journey: Unit 7 - Transformations and Constructions

Step 11: Transformations of graphs

The graph of $y=f(x)$ has a turning point at $(-1,2)$.
Write down the coordinates of the turning point of $y = f(-x) + 2$

Step 10: Inverse functions

Given that $f(x) = x^2 - 3$, find $f^{-1}(x)$.

Step 9: Composite functions

Given that $f(x) = 2x - 4$ and $g(x) = 3x + 5$, find $gf(3)$.

Step 8: Function notation

Given that $f(x) = x - 4$, find $f(5)$.

Step 7: Reflections of graphs

Describe the difference between the graphs $y = f(x)$ and $y = -f(x)$

Step 6: Translations of graphs

Describe the difference between the graphs $y = f(x)$ and $y = f(x + 2)$

Step 5: Trigonometric graphs

Sketch the graph of $y = \sin x^\circ$ for $0-360^\circ$.

Step 4: Loci

When drawing locus from a line, what shape will the locus form?

Step 3: Construct triangles

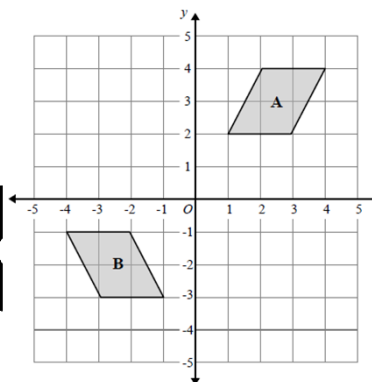
Construct an equilateral triangle with sides of length 5cm.

Step 2: Negative enlargement

When enlarging a shape by scale factor $-1/3$, describe what happens to the shape.

Step 1: Combination of transformations

Shape A is transformed to shape B by a reflection in the x-axis followed by a translation $\begin{pmatrix} p \\ q \end{pmatrix}$. Find the value of p and the value of q .



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