

Set 41: Orthogonal Sketching - Level 1

## Orthogonal $3^{\text {rd }}$ Angle Projection

Q1 What are $1^{\text {st }}$ and $3^{\text {rd }}$ angle projections?
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Q2 Why is it important what 'angle' is used in orthogonal drawings?
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Q3 What is the cone symbol used for?
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Q4 Redraw the $3^{\text {rd }}$ angle projection symbol.


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## Orthogonal $3^{\text {rd }}$ Angle Projection

Q1 What are $1^{\text {st }}$ and $3^{\text {rd }}$ angle projections?
Imagine an object is enclosed in a glass box. Then, a drawing (view) is made on the each side of the glass box. If the glass (representing the drawing 'planes') are used above and before the object, then this is referred to as drawing in $3^{\text {rd }}$ angle. If the glass panes below and behind the object are used, then this is called $1^{\text {st }}$ angle views.


Q2 Why is it important what 'angle' is used in orthogonal drawings? In Australia, and most countries, ONLY third angle projection is used. It is only relevant to recognise first angle project to understand why some reference sources appear to have views in incorrect positions.

## Q3 What is the cone symbol used for?

The symbol indicates that the orthogonal drawing is being made using 'third angle projection'. Most standards insist on third angle projection, but 'first angle projection' is still found in some references, particularly references from the USA.


What the symbol represents; the front and side view of a cone.
Q4 Redraw the $3^{\text {rd }}$ angle projection symbol.

