

ISOMETRIC DRAWING

This mobile revision pdf is based on detailed work found in the isometric section of the website.

Tap on the green link button below to go to the complete website section



Tap the blue button to view areas covered by this Revision PDF



ISOMETRIC DRAWING - 1

1. ISOMETRIC DRAWING AND DESIGNERS

2. ISOMETRIC PROJECTION AN EXPLANATION

3. DRAWING AN ISOMETRIC CUBE

4. ISOMETRIC GRID PAPER

5. DRAWING ISOMETRIC CIRCLES

6. DRAWING ISOMETRIC CYLINDERS

7. ISOMETRIC EXERCISES

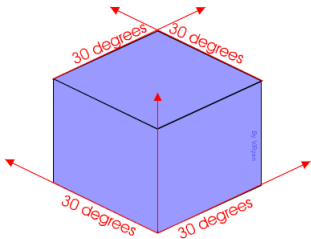
CONSIDER DOWNLOADING THE APP CALLED "SIMPLE SHADING TECHNIQUES COLOURED PENCILS " from the Mobile App Section of www.technologystudent.com

ISOMETRIC DRAWING AND DESIGNERS

V.Ryan © www.technologystudent.com 2019

Isometric drawing is way of presenting designs/drawings in three dimensions. In order for a design to appear three dimensional, a 30 degree angle is applied to its sides. The cube opposite, has been drawn in isometric projection.

Tap the image for information / an exercise



Tap the blue button for the next page.



Tap the red button to return to the Contents page

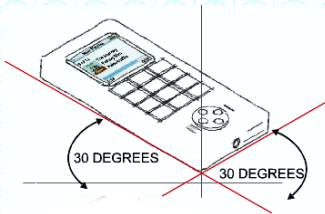


FREE HAND SKETCHING IN ISOMETRIC

V.Ryan © www.technologystudent.com 2019

Designers find 'free hand' sketching in isometric projection useful. The mobile phone / music player below, has been sketched in free hand isometric projection. It allows the designer to draw in 3D quickly and with a reasonable degree of accuracy. The design is still drawn at a 30 degree angle, although this is estimated, rather than drawn with graphics equipment.

Tap the image for information / an exercise



Tap the red button to return to the Contents page

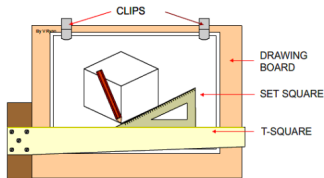


ISOMETRIC PROJECTION AN EXPLANATION

V.Ryan © www.technologystudent.com 2019

Isometric drawing is way of presenting designs/drawings in three dimensions. The example below has been drawn with a 30 degree set square. Designs are always drawn at 30 degrees in isometric projection. It is vital that drawing equipment such as T-squares and 30/60 degree set squares are used carefully. The drawing paper should be clip securely to a drawing board.

Tap the image for information / an exercise



Tap the blue button for the next page.



Tap the red button to return to the Contents page



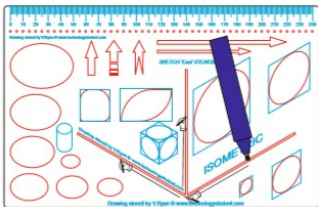
ISOMETRIC PROJECTION USING A STENCIL

V.Ryan © www.technologystudent.com 2019

The amazing drawing and sketching stencil, SKETCH 'Easi' STENCIL can be used to draw quickly and accurately, in isometric projection.

Tap on the image below for instructions, examples and exercises, regarding using the stencil to draw in isometric.

Tap the image for information / an exercise



Tap the blue button for the next page.



Tap the red button to return to the Contents page

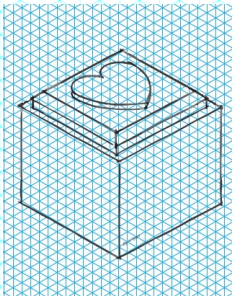


USING ISOMETRIC GRID PAPER

V.Ryan © www.technologystudent.com 2019

Isometric grid paper is a good way to start drawing in isometric projection. The grid has guidelines set a 30 degrees and also vertical, 90 degree lines. The drawing below shows a drawing of a simple container..

Tap the image for information / an exercise



Tap the red button to return to the Contents page

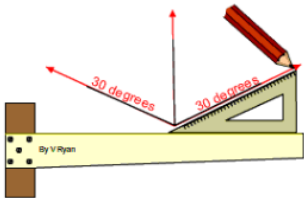


DRAWING AN ISOMETRIC CUBE

V.Ryan © www.technologystudent.com 2019

1. Draw two basic 30 degree guidelines, one to the left and one to the right, plus a vertical guideline in the centre of the drawing. In this example three edges of the cube have been drawn over the guidelines (they are slightly darker)

Tap the image for information / an exercise



Tap the blue button for the next page.



Tap the red button to return to the Contents page

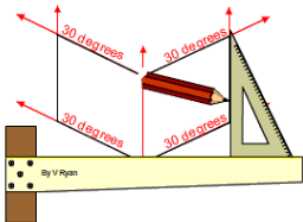


DRAWING AN ISOMETRIC CUBE

V.Ryan © www.technologystudent.com 2019

2. Draw guidelines to help you start constructing the left and right sides of the cube. Remember to use a 30 degree set square for the 'angled' lines.

Tap the image for information / an exercise



Tap the blue button for the next page.



Tap the red button to return to the Contents page

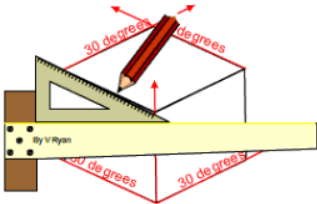


DRAWING AN ISOMETRIC CUBE

V.Ryan © www.technologystudent.com 2019

4. Complete the top of the cube by projecting lines with the 30 degree set square as shown below.

Tap the image for information / an exercise



Tap the blue button for the next page.

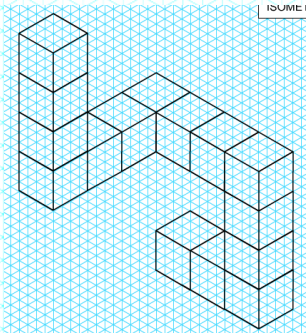
Tap the red button to return to the Contents page



TRY THIS EXERCISE

V.Ryan © www.technologystudent.com 2019

Tap the image for the exercise and guidance



Tap the red button to return to the Contents page

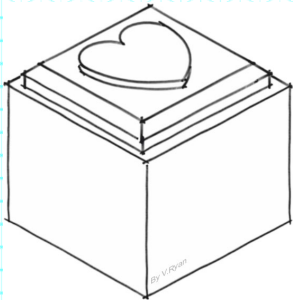


USING ISOMETRIC GRID PAPER

V.Ryan © www.technologystudent.com 2019

A 3D isometric sketch of a typical container is drawn below. The next few pages will take you through the stages of drawing the container in isometric.

Tap the image for information / an exercise



Tap the blue button for the next page.



Tap the red button to return to the Contents page

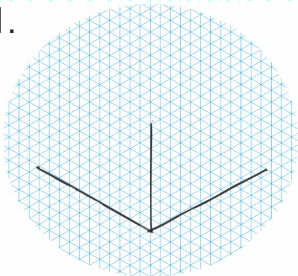


Tap the image for information / an exercise

V.Ryan © www.technologystudent.com 2019

Start by drawing the first three lines.
Each line should be the same length.
This can be achieved by counting the
number of 'squares' on the grid.

1.



Tap the blue button for the next page.



Tap the red button to return to the
Contents page

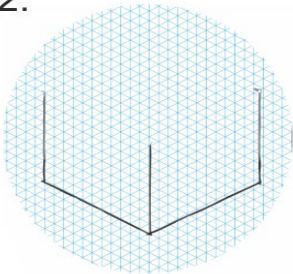


Tap the image for information / an exercise

V.Ryan © www.technologystudent.com 2019

Draw the three 'sides'. They should all be the same length.

2.



Tap the blue button for the next page.



Tap the red button to return to the Contents page

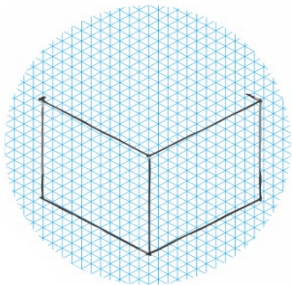


Tap the image for information / an exercise

V.Ryan © www.technologystudent.com 2019

Draw the two lines at the top of the
left and right hand sides.

3.



Tap the blue button for the next page.



Tap the red button to return to the
Contents page

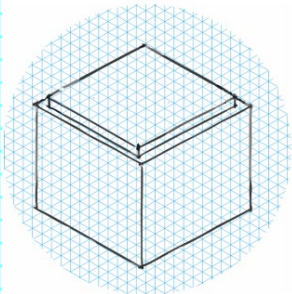


Tap the image for information / an exercise

V.Ryan © www.technologystudent.com 2019

Draw the top of the container,
using the grid as a guide.

4.



Tap the blue button for the next page.



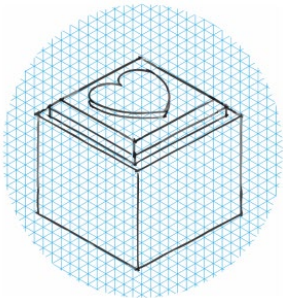
Tap the red button to return to the
Contents page



Tap the image for information / an exercise

V.Ryan © www.technologystudent.com 2019

Add detail to the lid



Tap the red button to return to the
Contents page

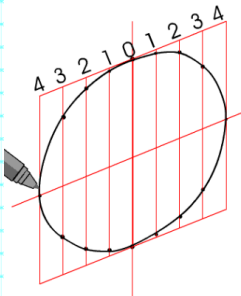


ISOMETRIC CIRCLES

V.Ryan © www.technologystudent.com 2019

'Sketching' an isometric circle may be fast, but it is unlikely to be accurate. For accuracy a specific technique is required. The diagram below shows an isometric circle, after being drawn using the correct technique

Tap the image for information / an exercise



Tap the blue button for the next page.



Tap the red button to return to the Contents page

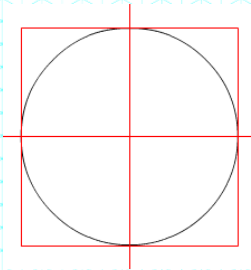


ISOMETRIC CIRCLES

V.Ryan © www.technologystudent.com 2019

1. Draw the original circle with a compass and enclose it in a box.

Tap the image for information / an exercise



Tap the blue button for the next page.



Tap the red button to return to the Contents page

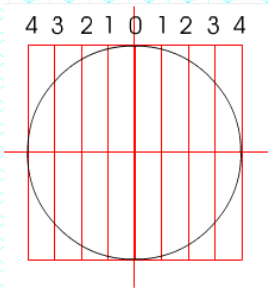


ISOMETRIC CIRCLES

V.Ryan © www.technologystudent.com 2019

2. Add vertical and horizontal guidelines.
Number the vertical lines (these are called 'ordinate lines') as shown on the diagram opposite.

Tap the image for information / an exercise



Tap the blue button for the next page.



Tap the red button to return to the
Contents page

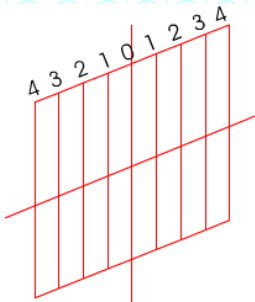


ISOMETRIC CIRCLES

V.Ryan © www.technologystudent.com 2019

3. Draw the grid in isometric using a 30 degree set square, being careful to use the same measurements as the original grid which surrounds the circle.

Tap the image for information / an exercise



Tap the blue button for the next page.



Tap the red button to return to the Contents page

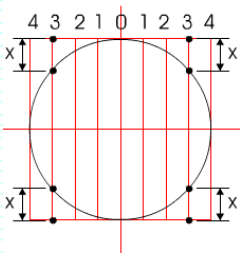


ISOMETRIC CIRCLES

V.Ryan © www.technologystudent.com 2019

4. To draw the circle in isometric projection simply measure each distance down each vertical line on the normal grid and transfer it to the isometric grid. On the diagram below and on the next slide - distance 'x' on guideline 3 is transferred to the isometric grid. This is repeated for each of the guidelines 1,2, and 4.

Tap the image for information / an exercise



Tap the blue button for the next page.



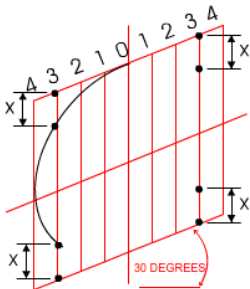
Tap the red button to return to the Contents page



ISOMETRIC CIRCLES

V.Ryan © www.technologystudent.com 2019

Tap the image for information / an exercise



Tap the blue button for the next page.



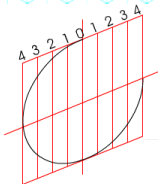
Tap the red button to return to the Contents page



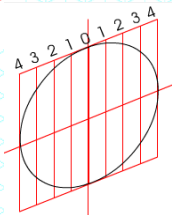
ISOMETRIC CIRCLES

V.Ryan © www.technologystudent.com 2019

5. Continue around the isometric circle, transferring distances from the original grid to the isometric grid - until the circle is complete.



Tap the images
for information /
an exercise



Tap the red button to return to the
Contents page



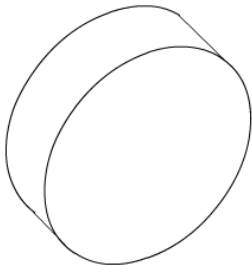
DRAWING AN ISOMETRIC CYLINDER

V.Ryan © www.technologystudent.com 2019

A cylinder (see below) is basically an isometric circle with added thickness / height / depth.

The stages of drawing a cylinder follows on the next few slides.

Tap the image for information / an exercise



Tap the blue button for the next page.



Tap the red button to return to the Contents page



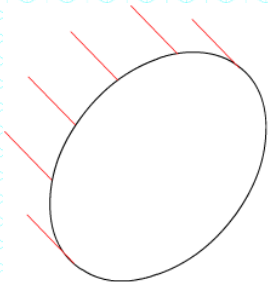
DRAWING AN ISOMETRIC CYLINDER

V.Ryan © www.technologystudent.com 2019

6. Having successfully drawn the isometric circle, developing it, into a cylinder is relatively easy.

Draw 30 degree guidelines out from the isometric circle as shown in the diagram

Tap the image for information / an exercise



Tap the blue button for the next page.



Tap the red button to return to the Contents page

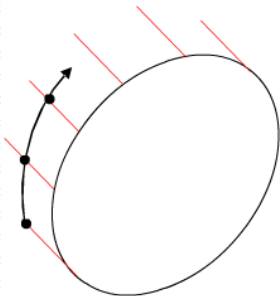


DRAWING AN ISOMETRIC CYLINDER

V.Ryan © www.technologystudent.com 2019

7. Measure the distance representing the 'thickness' of the cylinder along each 30 degree guideline. Start drawing a curve through each of the points.

Tap the image for information / an exercise



Tap the blue button for the next page.



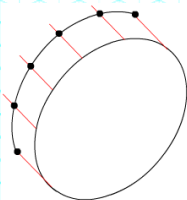
Tap the red button to return to the Contents page



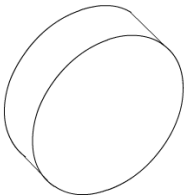
DRAWING AN ISOMETRIC CYLINDER

V.Ryan © www.technologystudent.com 2019

8. Draw the curve through each of the points to produce the final cylinder shade.



Tap the image for
information / an
exercise



Tap the red button to return to the
Contents page



ISOMETRIC EXERCISES

V.Ryan © www.technologystudent.com 2019

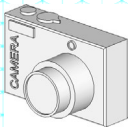
**Tap each image
an isometric
exercise**



**Tap each image
an isometric
exercise**



**Tap each image
an isometric
exercise**



Tap the red button to return to the
Contents page



Tap the image for information / an exercise

Tap the blue button for the next page.



Tap the red button to return to the
Contents page



Tap the image for information / an exercise

Tap the blue button for the next page.



Tap the red button to return to the
Contents page



Tap the image for information / an exercise

Tap the blue button for the next page.



Tap the red button to return to the
Contents page



Tap the image for information / an exercise

Tap the blue button for the next page.



Tap the red button to return to the
Contents page



