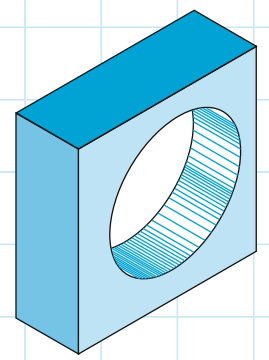
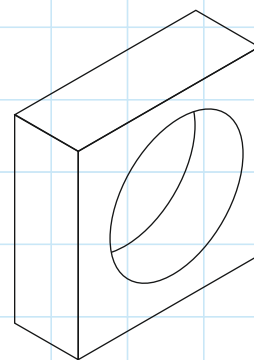
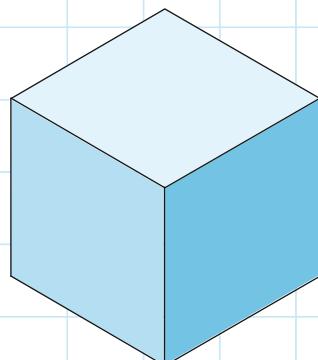
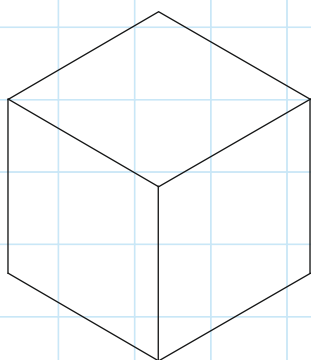
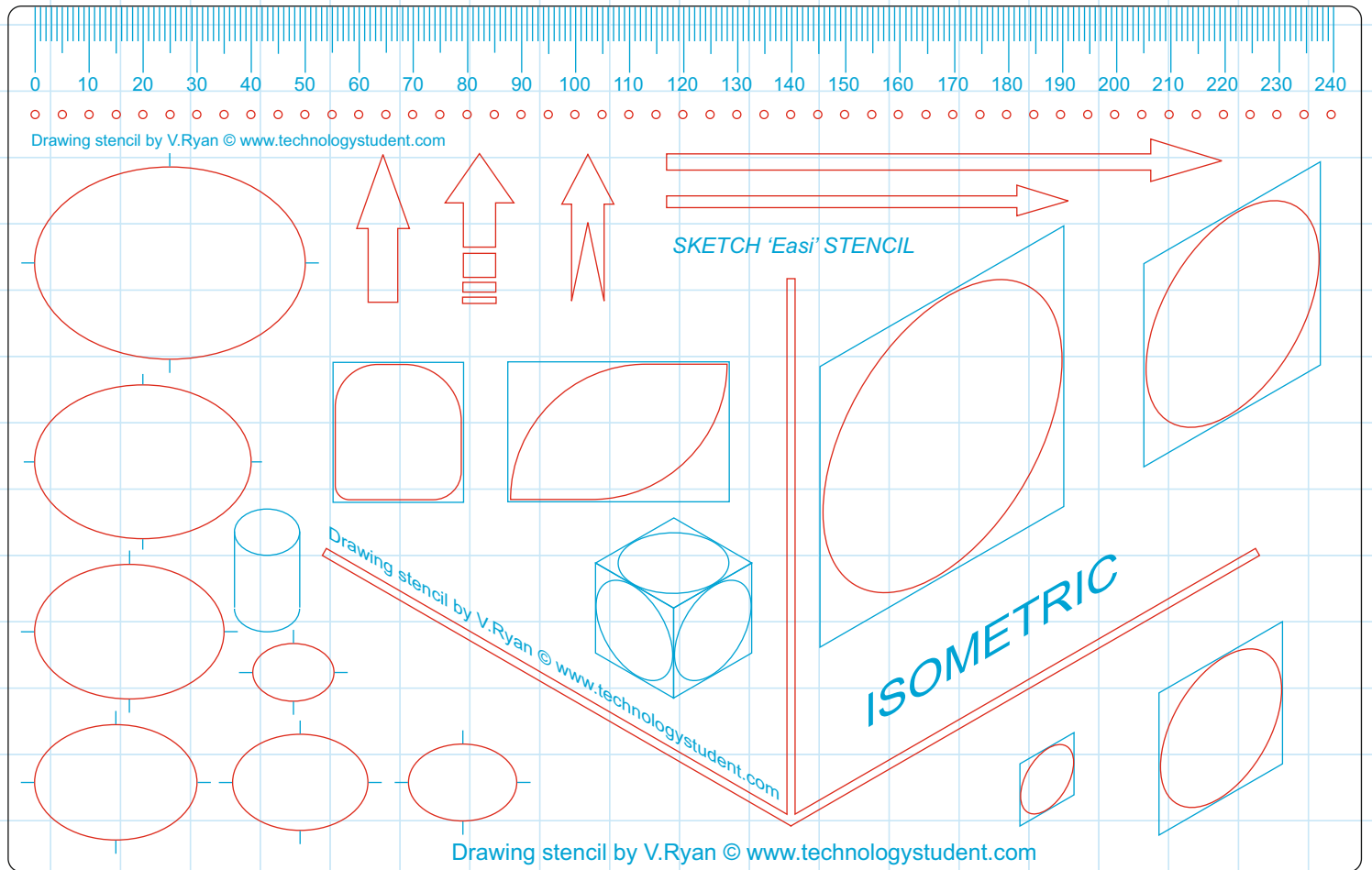


SKETCH EASi STENCIL

For these exercises, you will need to use a SKETCH EASi Stencil. The dxf file can be downloaded from http://www.technologystudent.com/despro_fish/sketch_easi1.html. Use a laser cutter to manufacture the stencil (blue lines - etch AND red lines - cut through).

LESSONS 3 and 4

DRAWING CUBES AND CUBOIDS IN ISOMETRIC PROJECTION AND APPLYING COLOUR AND SHADE



LESSONS 3 AND 4

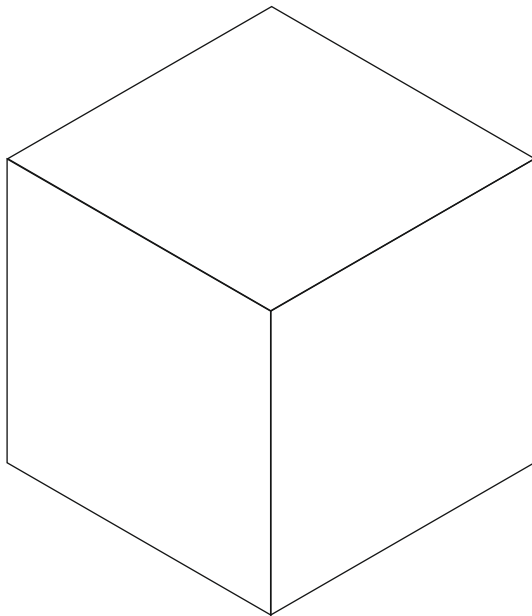
DRAWING AN ISOMETRIC CUBE USING THE SKETCH EASi STENCIL

For these exercises, you will need to use a SKETCH EASi Stencil. The dxf file can be downloaded from http://www.technologystudent.com/despro_fish/sketch_easi1.html. Use a laser cutter to manufacture the stencil (blue lines - etch AND red lines - cut through).

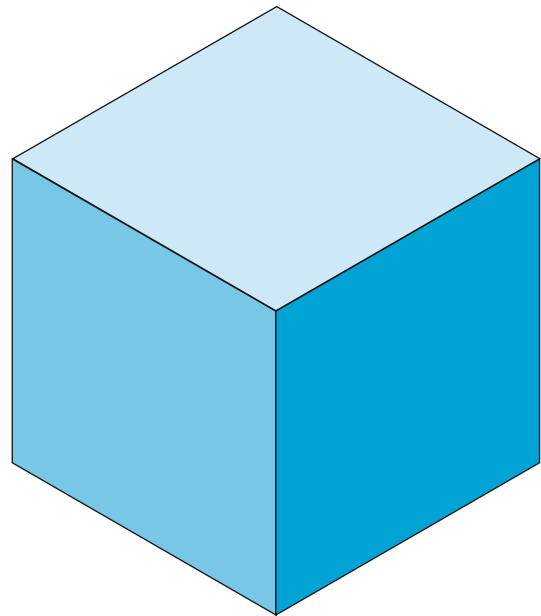
1. EXERCISE 1

In this exercise, you will draw a cube in isometric projection, using the SKETCH EASi STENCIL. You will then add appropriate colour and shade.

OUTLINE



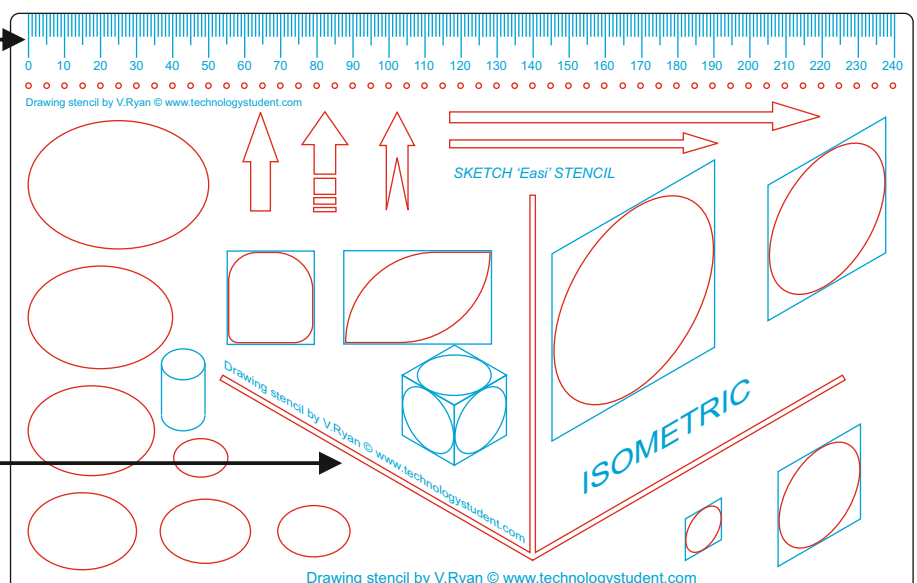
SHADED



2.

You will be using the ruler / straight edge.

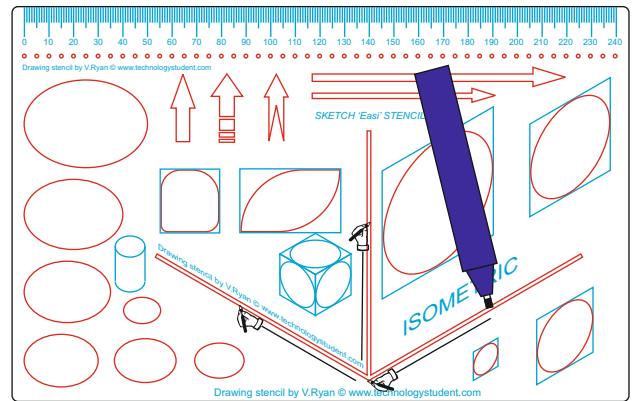
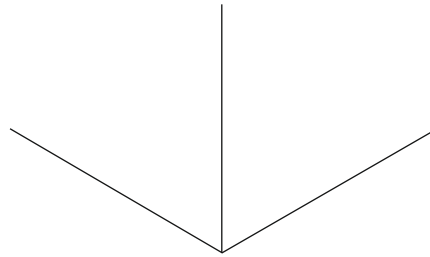
You will be using the isometric guidelines.



3. LET'S GET STARTED

USING THE ISOMETRIC GUIDES AND A FINE PENCIL, DRAW THE FIRST 'CORNER' OF THE CUBE.

CHECK THAT THE LENGTH OF EACH LINE IS THE SAME MEASUREMENT, FOR EXAMPLE 40mm.

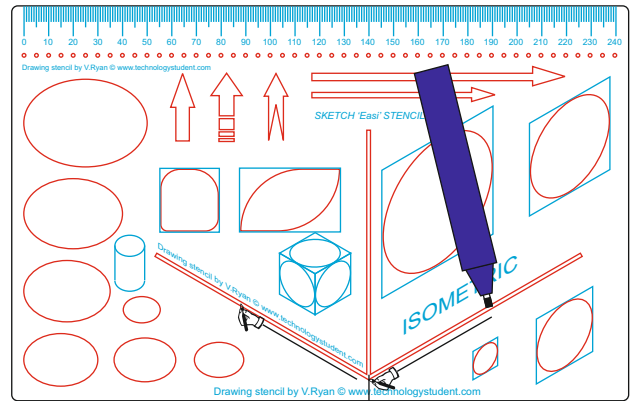
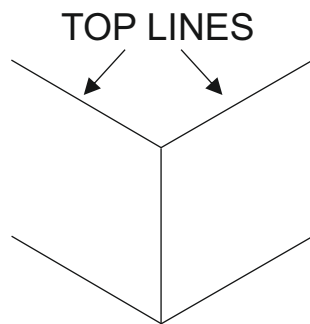


4.

MOVE THE STENCIL TO THE TOP OF THE VERTICAL LINE YOU HAVE DRAWN.

THEN DRAW THE TWO TOP LINES WITH THE ISOMETRIC GUIDES

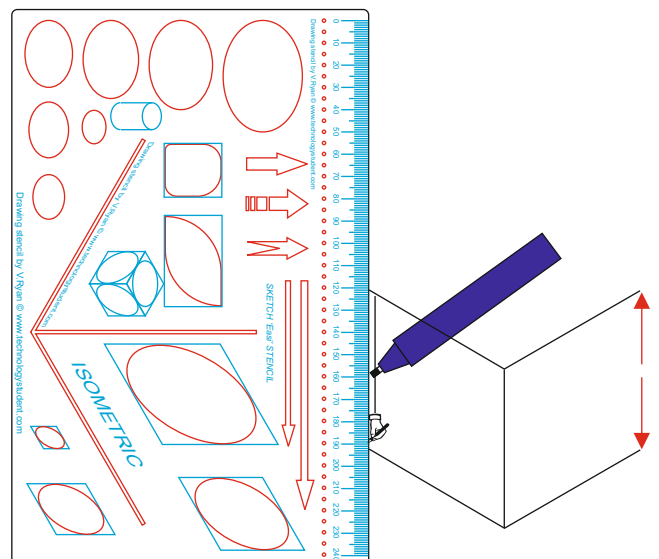
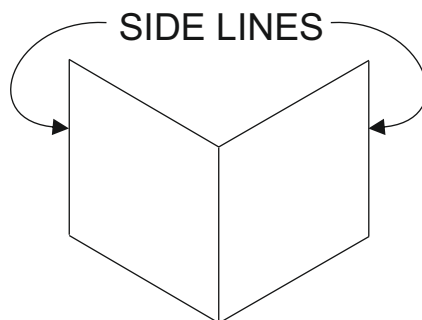
CHECK THAT THESE LINES ARE THE SAME LENGTH, AS ALL THE OTHER LINES.



5.

TURN THE STENCIL ROUND TO 90 DEGREES AND DRAW THE TWO SIDE LINES.

THE ISOMETRIC GUIDES CAN BE USED TO DRAW THESE LINES AS WELL, IF YOU WANT TO TRY THIS OUT.

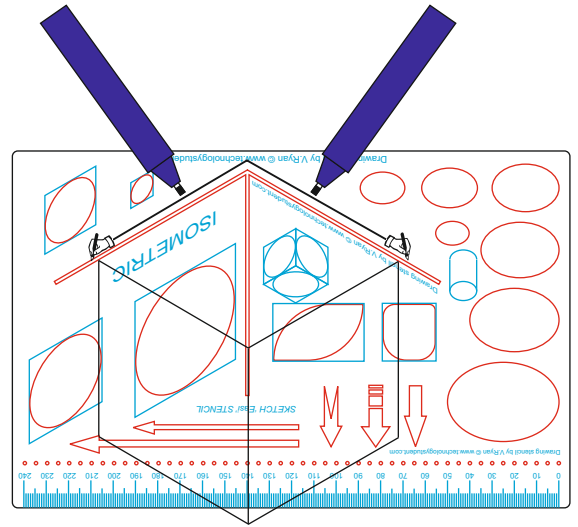
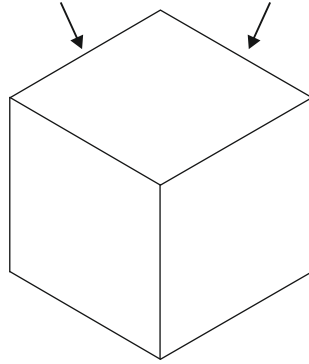


6.

TURN THE STENCIL TO 180 DEGREES (UPSIDE DOWN).

USE THE ISOMETRIC GUIDES TO COMPLETE THE TOP OF THE ISOMETRIC CUBE

COMPLETED CUBE



7.



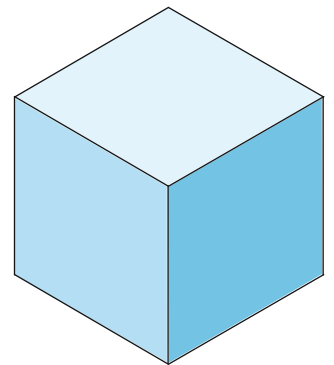
USE THE LINKS TO www.technologystudent.com (below), to learn how to shade the cube you have drawn, using the EASi Sketch Stencil. Watch the video(s) on the web pages, as well.

Draw two more cubes and practice the various shading techniques.

<https://www.youtube.com/watch?v=T85ErvThdvY>

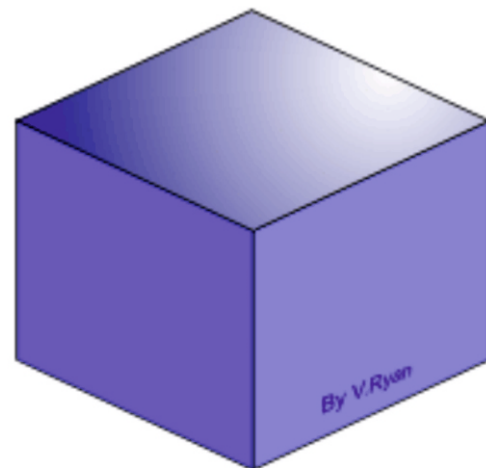
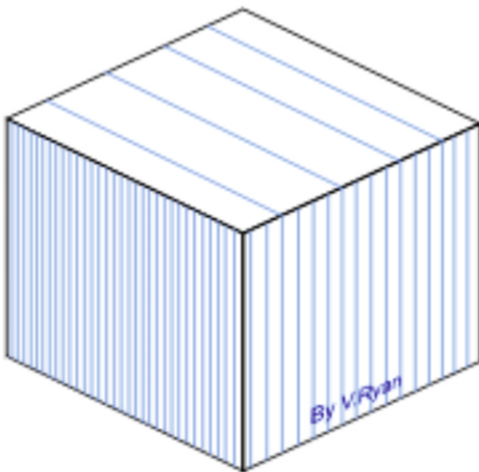
<http://www.technologystudent.com/despro2/drawtec2a.htm>

SHADED



EXAMPLE SHADING TECHNIQUES

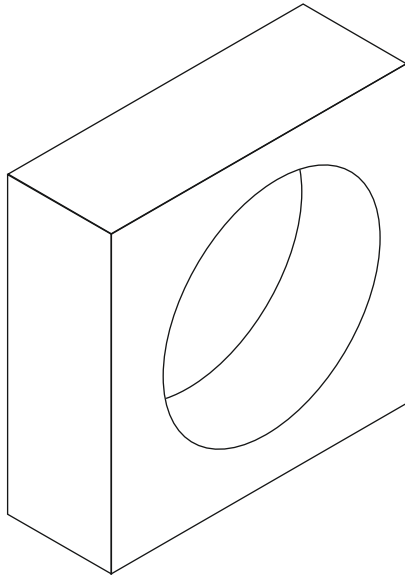
DARK ← FAINT



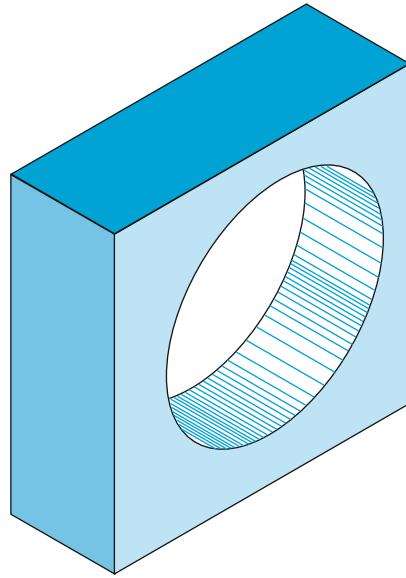
8. EXERCISE 2

In this exercise, you will draw a cuboid in isometric projection, using the SKETCH EASi STENCIL. You will then add appropriate colour and shade.

OUTLINE



SHADED

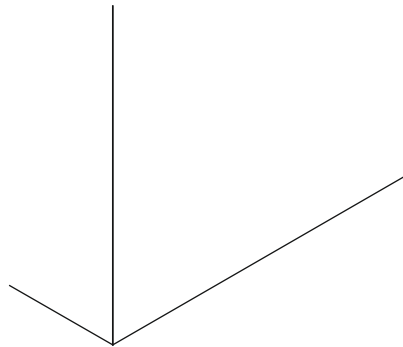


9.

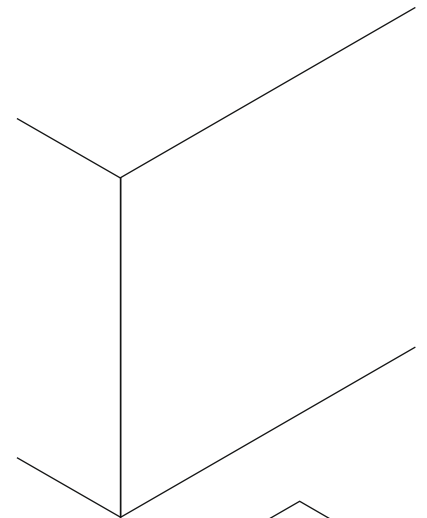
USING THE SKETCH EASi STENCIL, DRAW THE CUBOID, FOLLOWING THE SAME STAGES AS FOR THE PREVIOUS EXERCISE.

REMEMBER, THE SIDES ARE NOT ALL THE SAME SIZE, THIS WHY THIS TYPE OF SHAPE IS CALLED A 'CUBOID'.

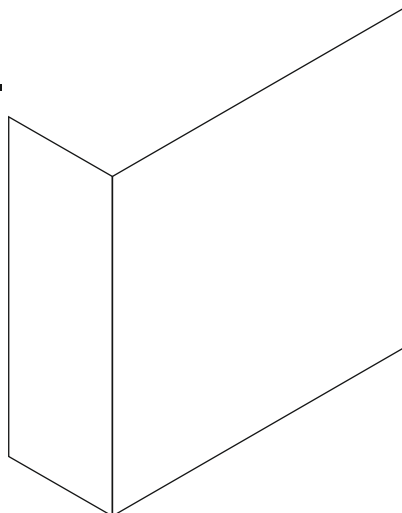
a.



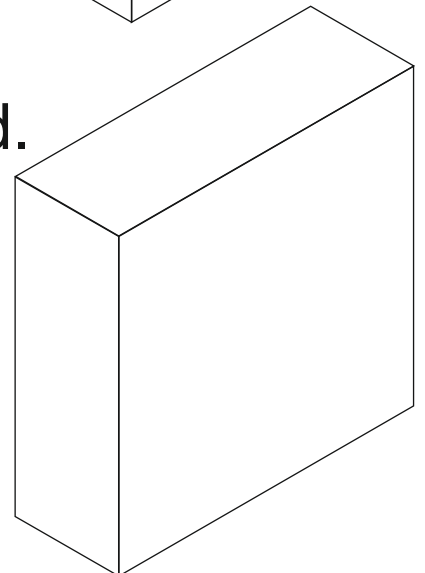
b.



c.

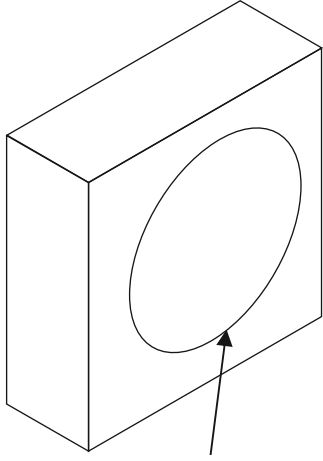


d.

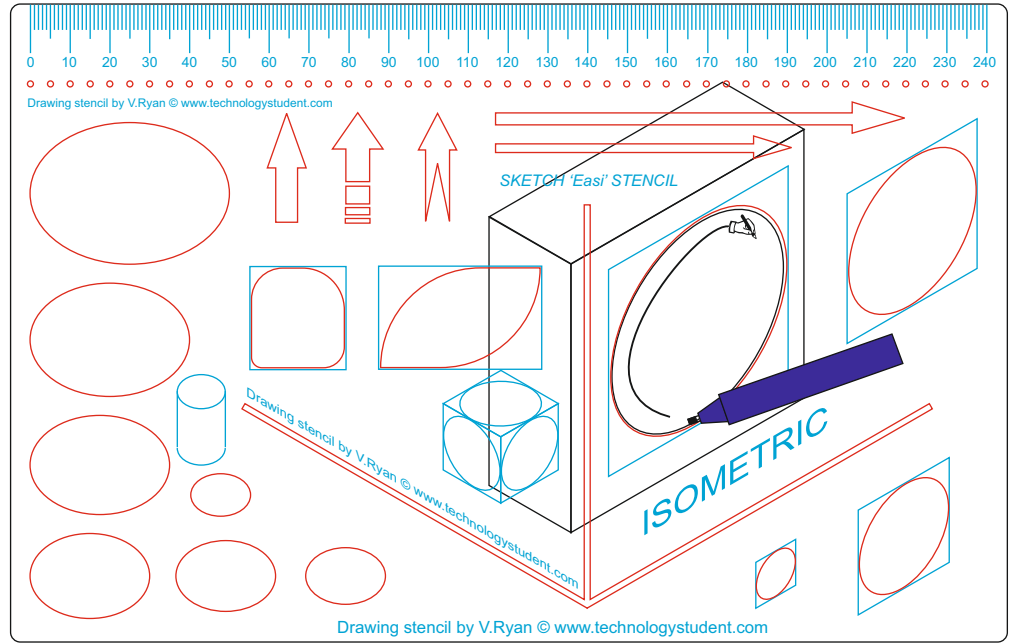


10.

TO DRAW THE ISOMETRIC CIRCLE, SIMPLY PLACE THE STENCIL OVER THE TOP OF THE CUBOID, POSITIONING ONE OF THE LARGE ISOMETRIC CIRCLES, SO THAT IT IS CENTRED ON THE SURFACE OF THE CUBOID. THEN DRAW THE CIRCLE.

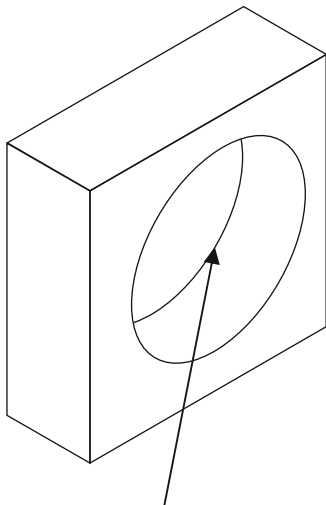


CIRCLE CENTRE ON FACE OF CUBOID

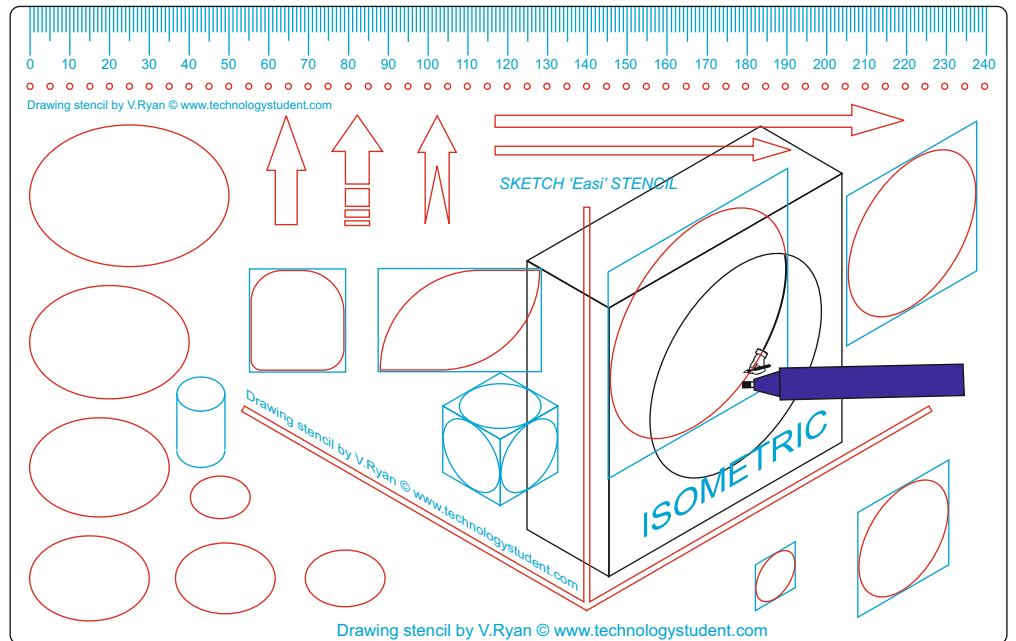


11.

TO MAKE THE CIRCLE LOOK LIKE A 'HOLE', PLACE THE STENCIL OVER THE TOP OF THE CUBOID. POSITION THE SAME LARGE ISOMETRIC CIRCLE, SO THAT IT IS SLIGHTLY TO THE LEFT AND ABOVE THE ORIGINAL CIRCLE. THEN DRAW THE 'ARC' / 'CURVE'.



ARC / CURVE DRAWN TO THE LEFT AND ABOVE THE ORIGINAL ISOMETRIC CIRCLE



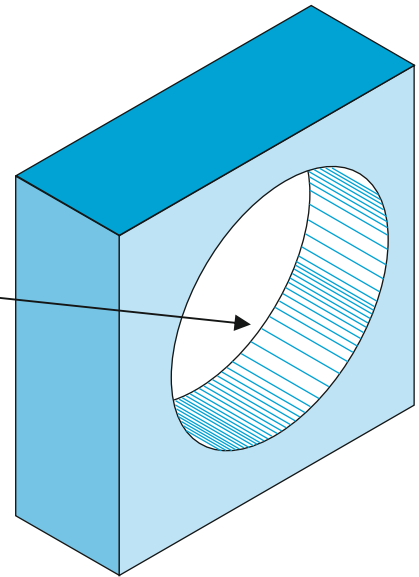
12. 

USE THE LINKS TO www.technologystudent.com (below), to learn how to shade the cuboid you have drawn, using the EASi Sketch Stencil. Watch the video(s) on the web pages, as well.

PAY PARTICULAR ATTENTION TO THE WAY THE CURVED INTERNAL SURFACE IS SHADED.

Draw two more similar cuboids and practice the various shading techniques.

SHADED



FLAT SURFACES

<http://www.technologystudent.com/despro2/drawtec2a.htm>

CURVED SURFACES

<http://www.technologystudent.com/despro2/drawtec3a.htm>

VIDEO

<https://www.youtube.com/watch?v=T85ErvThdvY>

13. EXTENSION TASK

USING THE SKETCH EASi STENCIL, DRAW THE OBJECT SEEN OPPOSITE.

THEN ADD APPROPRIATE COLOUR AND SHADE.

FOLLOW THE WEB LINKS GIVEN THROUGHOUT THIS BOOKLET, TO HELP YOU DRAW AND RENDER THE OBJECT SUCCESSFULLY

