



Work Sheet 22

Circular Array Tool (Clock Face Design)

Please work to this exercise, you can then make modifications to suit your Machine/Model-Please keep all objects the same colour

We have practised the Array tools in the "Properties" Tool Bar and in The Right Click Menu.

There is yet a third Array tool we can now use from the Tool Bar on the Left.

The Array tool offers both Circular and Array options, they can then both be adjusted within its own Toolbox, this

Toolbox will only show once you start to use "Circular" or "Rectangular" Array.

We have used the SQ23 Hoop (230mm x 230mm) for this project, however this can be changed to suit the model of machine you are using.

For this exercise we are going to use "Circular" Array.

From the Tool Bar on the Left Select "Text" option.

Select Font xpg 058 as below.



Place your cursor onto your Page and Left Click once,

The cursor will be flashing in the box indicated "Text" Type the Number "1", this will now be placed on your page.

Using the select Tool, Select the Number "1"









Gio ahead ... get creative!

Your digit can be resized or repositioned and then reselected as text and you are still able to edit as Text.

The Number "1" now needs to be positioned as follows, with the select box open, type in the following Measurements X = 0.0mm Y = 105.0mm.

X:	0.0 mm
Y :	105.0 mm

The Digit will be placed as this image, delete the Black Outline



Select the Digit "1", from the Tool Bar on the Left Select "ARRAY" "Circular"

Type the following Measurement from the Array Tool Bar shown at the top of your page

Start angle: 90 °	Step angle: 30 ° Clone objects	Apply
End angle: 90 °	Step count: 12	Select new

As we are designing a clock face, for this exercise the above settings will give a repeat of the digit "1" in the correct place as per a clock Face as shown in the image below.

Click the "Apply" Button as shown above Right Side.

Your numbers will be placed precisley as per a clock face however, we now need to "Edit" each number and possibly reposition/rotate "Zero to Zero" Particularly the Number 12.



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Gio ahead... get creative!
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Starting at the Twelve O'clock Digit "1" select first then go to "Text" Option, your Text Tool Bar will now open for editing, Select and Edit the twelve o'clock "position 1" to read "12"

Type the Co-ordinates as below X= 0.0, Y=105.00 your number "12" will now be Centred vertically.

Text 1	Text 12	X: 0.0 mm	
Font name W xpg058	Font name W xpg058	Y: 105.0 mm	

Select the Digit"1" for your "1" o'clock" position, this time it will need to be rotated, select the Digit "1" and select a second time to enable "Rotate" Handles.

The digit now needs to be rotated manually alternatively you can type in the Angle required.

The Angle of Rotation is shown on the lower left of your page, as you Rotate you will see the Angle of Rotation changing until your Digit becomes correctly positioned in this case we want 30 Degrees.



Select the Digit Locating the 2 o'clock Position, Select "Text and Edit to read Digit "2"

Select using Selection Tool and Select a second Time, Rotate as before to the correct Angle this time 60 Degrees.



Gio ahead ... get creative!



Continue this process until all your numbers are correctly Edited and Rotated to the correct positions.

The end result should resemble a clock Face as the image shown here.

For the next part of the exercise we need to re visit one of our previous Exercises "Trim Tool".

Draw a precise Circle, Copy and Paste, reduce the size of the pasted circle by holding the "Shift" Key at the same time to keep precise and dead centre to each other.

With Both Large and Small Circle Selcted Right Click, Select "Shaping" and "Trim"

Next, Delete the Smaller inner Circle object to leave a Tyre type shape, change the fill to Satin

This will form the centre of our clock face, to centre this object First "Select" then in the Coordinates tool Bar "ZeroZero" X and Y, as shown below, resize as required and finally change colour,

X: 0.0 mm

Y: 0.0 mm

Open your Text tool bar and Type the word "Time" copy and Paste this. Edit your pasted text to read "To", copy and paste again and type the Word "Sew" you should now have - Time, To, Sew. The reason for copy and pasting is to keep the text the correct size, if you prefer you can ignore copy and paste and insert the lettering as you would normally do.

Gio ahead ... get creative!









Place the Word "Time" Top Centre by typing "Zero" in the Coordinates Box and Delete any outline.

Use your Alignment tools to align words central and level to each other, leaving a space in the middle as shown



In this week's files we have included some sample readymade Designs for you to use with your Clock. Position as required.

For the final stage we need to place a border around the edge of the clock face as a guide and for appearance.

Draw a precise circle we know the size of the Diameter of our Clock "220mm" re size your circle to this exact size (the size is shown at the lower left of your screen).

Delete the inner section this time leaving just the line stitch outline.

Centre again using "Zero Zero" and Keep everything the same colour.

Open the Properties tool bar, Outline Tab, Select Pattern 119, change the colour if not already done in order to keep your design all the same colour.



Go ahead ... get creative!

