

# Page coordinates sample

This sample shows the effects of the manipulation of the CTM (Current Transformation Matrix), that is the device which affects the page coordinate system used to place graphics contents onto the canvas.

The following steps represent the operations applied to this page's CTM in order to alter it. Each step writes the tag "Step" at the current coordinates origin and draws the page frame:

```
Step 0) CTM (default): 1.0, 0.0, 0.0, 1.0, 0.0, 0.0
Step 1) CTM (after translate(72,72)): 1.0, 0.0, 0.0, 1.0, 72.0, 72.0
Step 2) CTM (after rotate(20)): 0.9396926207859084,
-0.3420201483256687, 0.3420201433256687, 0.9396926207859084,
72.0, 72.0
Step 3) CTM (after translate(0,72) and scale(.5,.5)):
0.4698463108929542, -0.17101007166283436, 0.17101007166283436,
0.4698463108929542, 96.62545031944815, 139.6578686965854
Step 4) CTM (after resetting CTM): 1.0,
-1.1102230246251565E-16, -1.1102230246251565E-16, 1.0,
1.4210854715202004E-14, 0.0
Note that the (negligible: 1.4210854715202004E-14)
approximation of the CTM components at step 4 is due to
floating point precision limits; their exact values should be
1.0, 0.0, 0.0, 1.0, 0.0, 0.0.
```

Upper-left or

Step 3  
Step 1  
Step 2

Step 4