The circle diagram shows unit circle with labels:

y

1

$\frac{1}{2}$

$\sin\alpha$

$\tan\alpha = \dfrac{\sin\alpha}{\cos\alpha}$

α

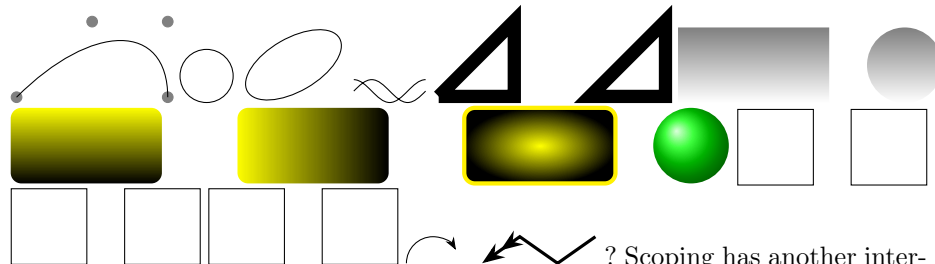-1 $\quad$ $-\frac{1}{2}$ $\qquad$ $\cos\alpha$ $\quad$ 1 $\quad$ x

$-\frac{1}{2}$

-1

The angle α is 30° in the example ($\pi/6$ in radian). The sine of α which is the height of the red line is
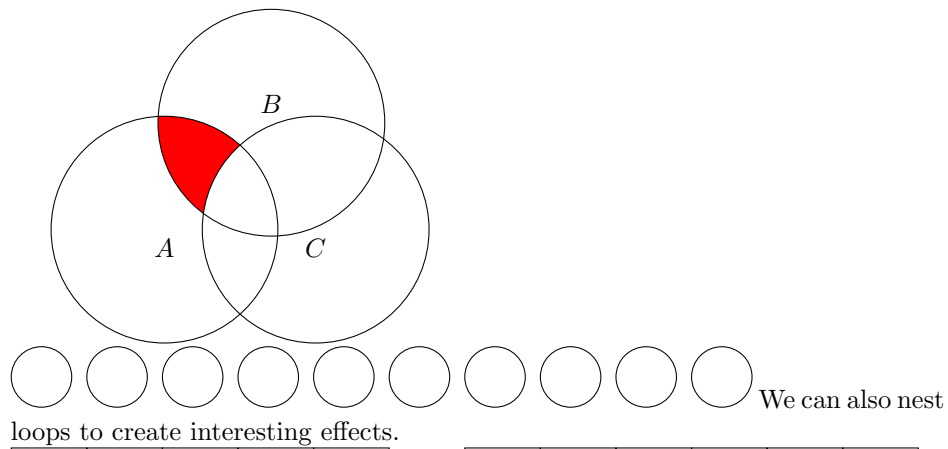
$$\sin\alpha = 1/2.$$

By the theorem of Pythagoras,...

Curved Path Construction.

? Scoping has another inter-
esting effect: Any changes to the clipping area are local to the scope. Thus, if
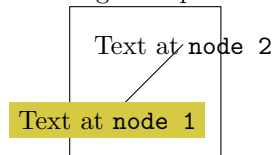you say \clip somewhere inside a scope, the effect of the \clip command ends

after the end of that scope. ‖ $\qquad$ $x = 1$, $x = 2$, $x = 3$,

We can also nest loops to create interesting effects.

1,5	2,5	3,5	4,5	5,5
1,4	2,4	3,4	4,4	5,4
1,3	2,3	3,3	4,3	5,3
1,2	2,2	3,2	4,2	5,2
1,1	2,1	3,1	4,1	5,1

7,5	8,5	9,5	10,5	11,5	12,5
7,4	8,4	9,4	10,4	11,4	12,4
7,3	8,3	9,3	10,3	11,3	12,3
7,2	8,2	9,2	10,2	11,2	12,2
7,1	8,1	9,1	10,1	11,1	12,1

Labeling examples using TikZ.

Text at `node 2`

Text at `node 1`

You can also position labels on curves and, by adding the `sloped` option, have them rotated such that they match the line's slope.

near start   middle   very near end

Using pics to reuse a piece of code in a picture.

α