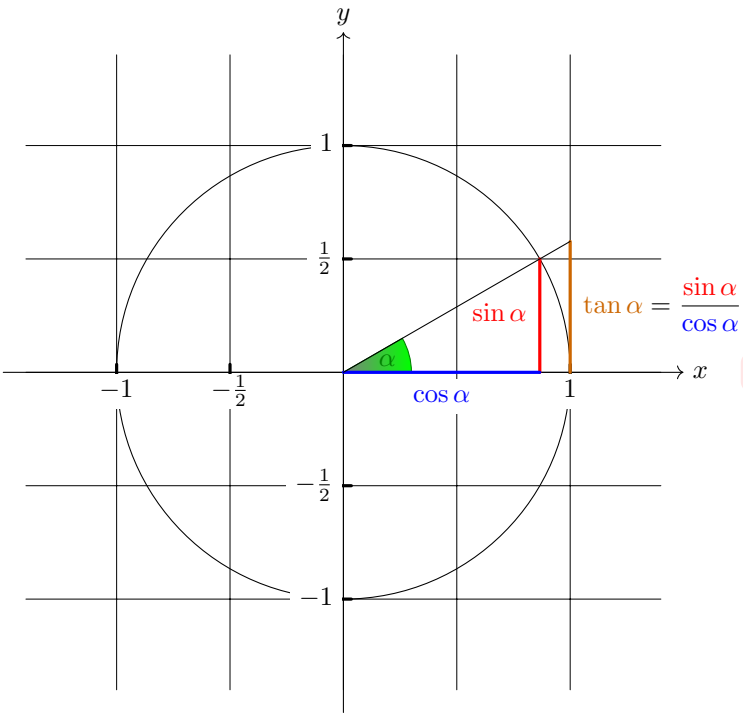
1 Karl's graph

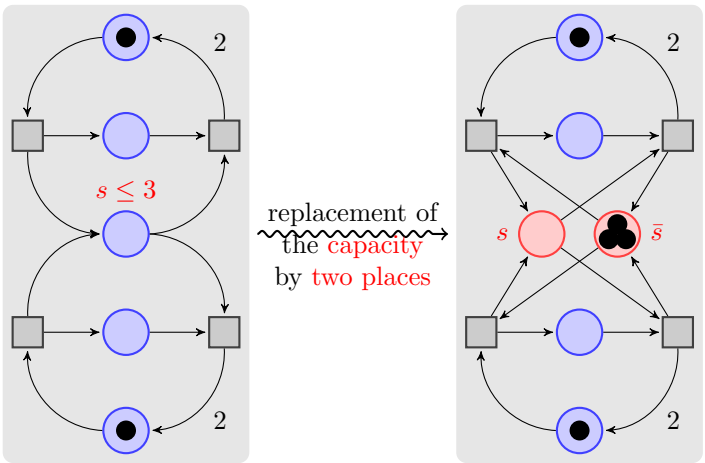


The angle α is 30° in the example ($\pi/6$ in radian). The sine of α which is the height of the red line is

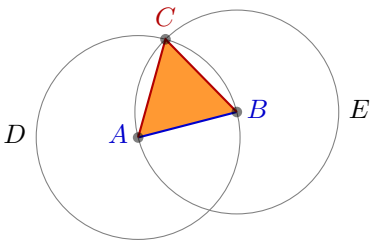
$$\sin\alpha = 1/2.$$

By the theorem of Pythagoras,...

2 Petri Nets



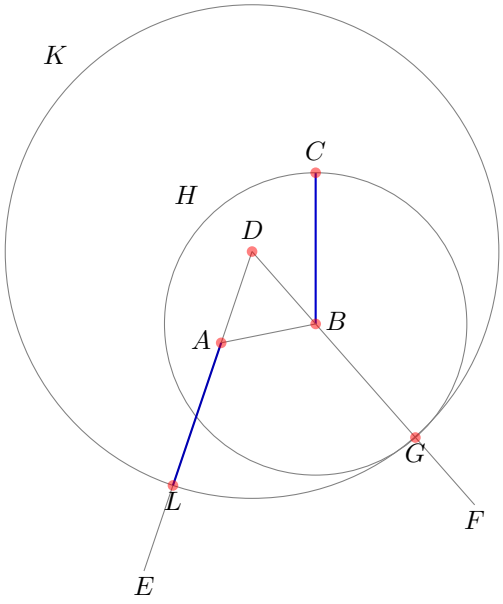
3 Book I, Proposition I



Proposition I
To construct an equilateral triangle on a given finite straight line.

Let AB be the given finite straight line. . . .

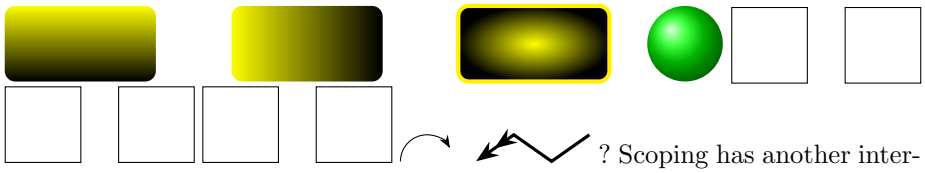
4 Book I, Proposition II



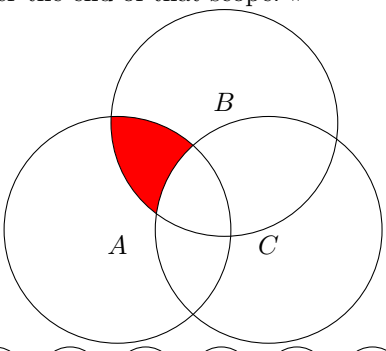
Proposition II
To place a a straight line equal to a given straight line . . .

5 Diagrams as Simple Graphs

Curved Path Construction.



? Scoping has another interesting 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.  $x = 1$, $x = 2$, $x = 3$,

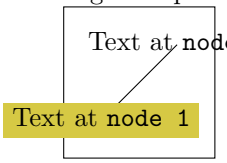


We can also nest loops to create interesting effects.

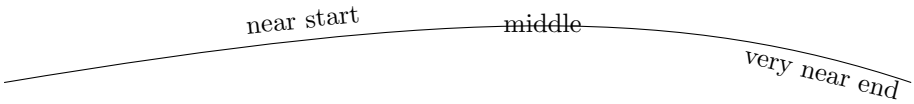
1,5	2,5	3,5	4,5	5,5
1,4	2,4	3,4	4,4	5,4
1,3	2,3	3,3	4,3	5,3
1,2	2,2	3,2	4,2	5,2
1,1	2,1	3,1	4,1	5,1

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.



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



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