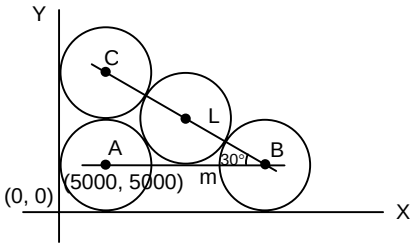
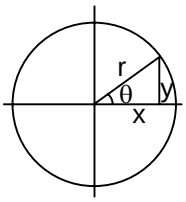
## ◎ Floating Point (TAN)

♦Diagram




$\tan\theta = y / x$

♦Action Description

The circle with diameter is 10000 unit length, ask the length of Line m, i.e. the absolute coordinate of B point.

Formula : Line segment m = $\overline{AC} \times \tan\angle C$ ($\overline{AC}$ length = diameter)

♦Program

M8002

| | | | | | | |
|---|---|---|---|---|---|---|
| [DMOVP | K60 | D0 | | ] | ∠C = 60° → (D0) binary integer value |
| M8000 | | | | | | |
| [DFLT | D0 | D4 | | ] | Convert ∠C to binary floating value → (D5, D4) |
| [DEDIV | K31415926 | K1800000000 | D20 | ] | (π /180) → (D21, D20) |
| [DEMUL | D4 | D20 | D30 | ] | (D5, D4)angle × (π /180) → (D31, D30) RAD binary floating value |
| [DTAN | D30 | D32 | | ] | (D31, D30)RAD → (D33, D21) TAN binary floating value |
| [DMUL | K10000 | K1 | D40 | ] | the length of segment $\overline{AC}$ = Diameter |
| [DFLT | D40 | D42 | | ] | Convert integer value of segment $\overline{AC}$ to binary floating point format |
| [DEMUL | D42 | D32 | D100 | ] | D100 is the binary floating point value of Line m |
| [DINT | D100 | D200 | | ] | D200 is the binary integer value of Line m |