

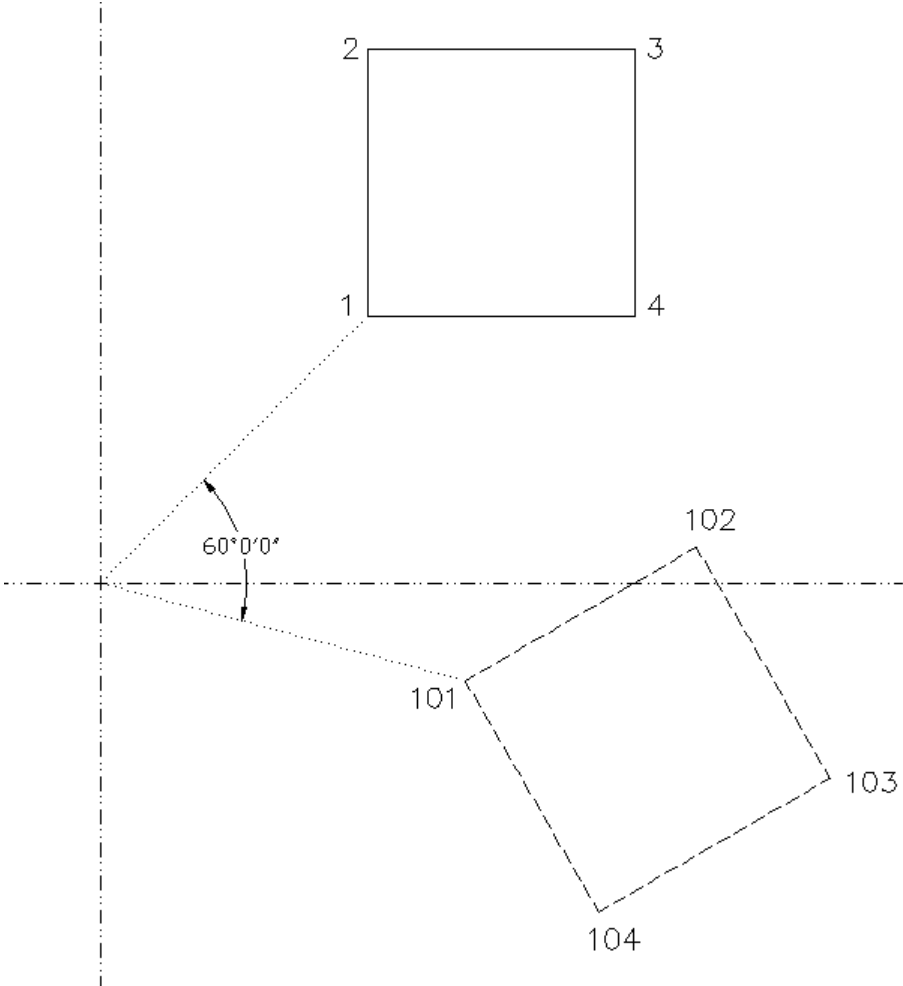
# Rotate Points

Using COGO+ Pro by [Simple Geospatial Solutions](#)

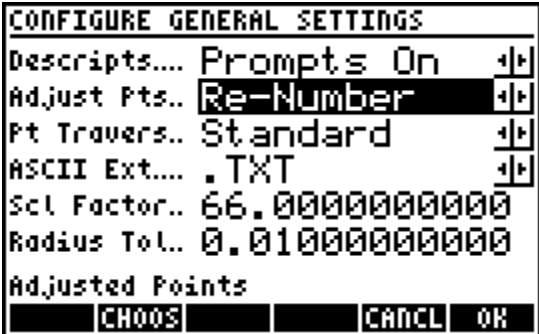
The Rotate Points program in COGO+ Pro is found in the ADJUSTments menu. Specify a Base Point, a rotation angle and a series of points to rotate. A setting under General Settings allows the user to toggle if the adjusted points will be overwritten with the same point numbers or if new points will be created with an additive number.

### Example 1

In this example we will rotate Points 1 to 4 from Base Point 0,0 by 60 degrees clockwise, and will renumber the adjusted points by adding 100 to the point numbers.



Step 1: Ensure the user setting is configured to Re-Number adjusted points.



Step 2: Store the coordinates for Points 1-4.

```
STORE/EDIT POINTS
Pt #... 1
North.. 10.0000m
East... 10.0000m
Elev... 0.0000m
Desc... COGO

Point Number
EDIT LOW NEXT COPY CANCL STORE
```

```
STORE/EDIT POINTS
Pt #... 2
North.. 20.0000m
East... 10.0000m
Elev... 0.0000m
Desc... COGO

Point Number
EDIT LOW NEXT COPY CANCL STORE
```

```
STORE/EDIT POINTS
Pt #... 3
North.. 20.0000m
East... 20.0000m
Elev... 0.0000m
Desc... COGO

Point Number
EDIT LOW NEXT COPY CANCL STORE
```

```
STORE/EDIT POINTS
Pt #... 4
North.. 10.0000m
East... 20.0000m
Elev... 0.0000m
Desc... COGO

Point Number
EDIT LOW NEXT COPY CANCL STORE
```

Step 3: Start the Rotate/Mirror program and the first input required is the Base Point. Since we will rotate around 0,0 simply press **[F2]** **[0,0]** to specify 0,0 as the Base Point.

```
ROTATE POINTS

Base Point:
*
BROWS 0,0 MIRROR CANCL OK
```

Step 4: On the following screen a rotation angle is required. In this example a rotation of 60° clockwise will be done, so simply enter 60. Note: The option **[F1]** **[CALC]** is available.

```
ROTATE POINTS

Rotation Angle:
60*
CALC CANCL OK
```

Step 5: Enter the points you wish to rotate, in this example Points 1 to 4, enter 1..4.

```
ROTATE POINTS
Point(s):
1..4
BROWS ALL CANCL OK
```

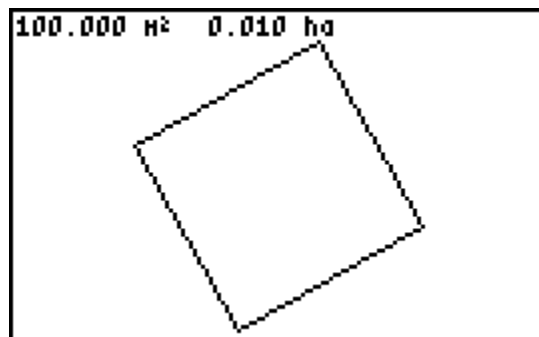
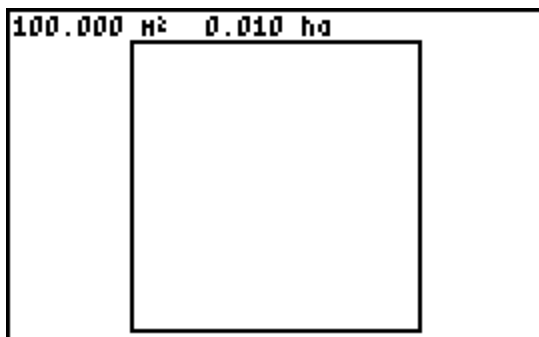
Step 6: Enter the additive point number to re-number the points, enter 100.

```
RE-NUMBER ADJUSTED POINTS
Additive Number.. 100
Add to existing number
EDIT CANCL OK
```

Step 7: The points are calculated, the program displays the points that are being calculated.

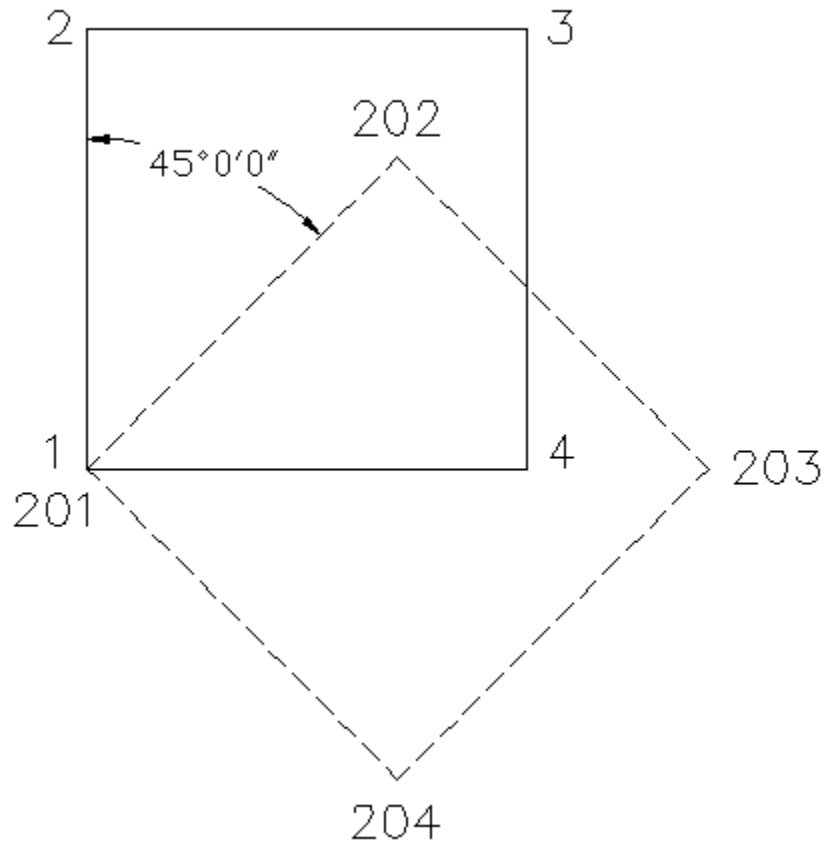
```
Storing Point 101
```

Optionally you could compare before and after, for example by calculating Area.



## Example 2

In this example we will rotate Points 1 to 4 from Base Point 1 by 45 degrees clockwise, and will renumber the adjusted points by adding 200 to the point numbers.



Step 1: Since we have already stored Points 1 to 4, start the Rotate/Mirror program and the first input required is the Base Point, enter 1.

```
ROTATE POINTS
.....
Base Point:
1
[BRWS] [0,0] [MIRR] [CANCL] [OK]
```

Step 2: On the following screen a rotation angle is required. In this example a rotation of 45° clockwise will be done, so simply enter 45.

```
ROTATE POINTS
.....
Rotation Angle:.....
45♦
CALC      |      |      | CANCL  OK
```

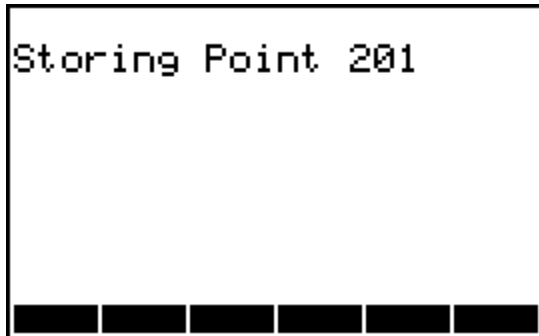
Step 3: Enter the points you wish to rotate, in this example Points 1 to 4, enter 1..4.

```
ROTATE POINTS
.....
Point(s):.....
1..4♦
BROWS ALL |      |      | CANCL  OK
```

Step 4: Enter the additive point number to re-number the points, enter 200.

```
RE-NUMBER ADJUSTED POINTS
Additive Number.. 200
.....
Add to existing number
EDIT      |      |      | CANCL  OK
```

Step 5: The points are calculated, the program displays the points that are being calculated.



Optionally as a check you could plot Points 1-4 and 201-204 afterwards to visually confirm.

