

1. Upload the class notebook.

2. The equation of a circle is

$$(x - a)^2 + (y - b)^2 = R^2$$

If the coordinate of three points on the circle are

| | | | |
|-----|------|------|-------|
| x | 8.21 | 0.34 | 5.96 |
| y | 0.00 | 6.62 | -1.12 |

determine R, a and b numerically.

3. Given the following data points

| | | | | | | | |
|-----|---|---------|---------|---------|---------|--------|--------|
| x | 0 | 0.25 | 0.50 | 0.75 | 1.0 | 1.25 | 1.5 |
| y | 0 | -1.2233 | -2.2685 | -2.8420 | -2.2130 | 2.5478 | 55.507 |

find a suitable interpolating function and calculate numerically the nonzero root of $y(x) = 0$.