

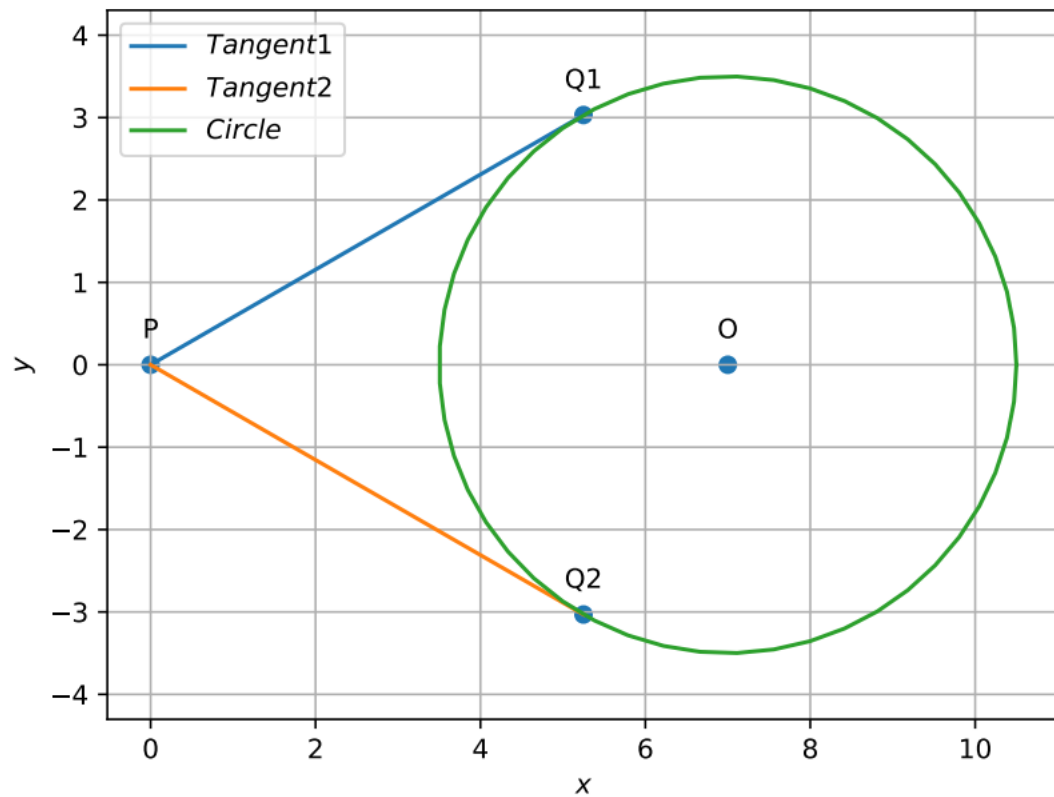
AI1110 Assignment1

AI21BTECH11016

March 2022

1 Problem 4-c

Drawing a pair of tangents to a circle of radius 4cm which is centered at O, from an external point P which touch the circle at Q1 and Q2:



Clearly, OQ_2P is a right-angled triangle. So, we can use Pythagorean theorem to find PQ_2 , which is the length of tangent required.

```
D:\c>gcc exe.c  
  
D:\c>a.exe  
length of OQ2 = 4  
length of OP = 7  
length of PQ2 = 5.744563  
  
D:\c>
```

Therefore, the length of the tangent drawn from P to the given circle is
5.744563