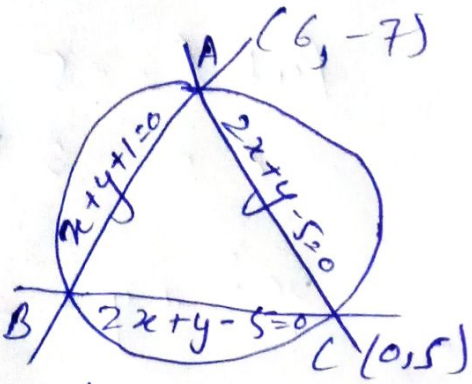
Sol? 6



Sides of triangle

$x+y+1=0$

$3x+y-5=0$

$2x+y-5=0$

eq. (i), (ii) and (iii)

Δ, as (3, -4), (0, 5) & (6, -7)

$x^2+y^2+2gx+2fy+c=0$ — (1)

$25+6g-8f+c=0$ — (2)

$25+10f+c=0$ — (3)

$85+12g-14f+c=0$ — (4)

~~from 2 and 3~~

from (2) - (3) :-

$6g-10f=0 \Rightarrow g=3f$ — (5)

from (4) - (3)

$60+12g-24f=0 \Rightarrow g-2f+5=0$ — (6)

Putting value of g from eq (5) in (6)

$3f-2f+5=0 \Rightarrow f=-5$

$g=3f=3\times(-5)=-15$

Put $f = -5$

$c = -25 + 50 = 25$

$x^2 + y^2 - 30x - 10y + 25 = 0$

Required circle.