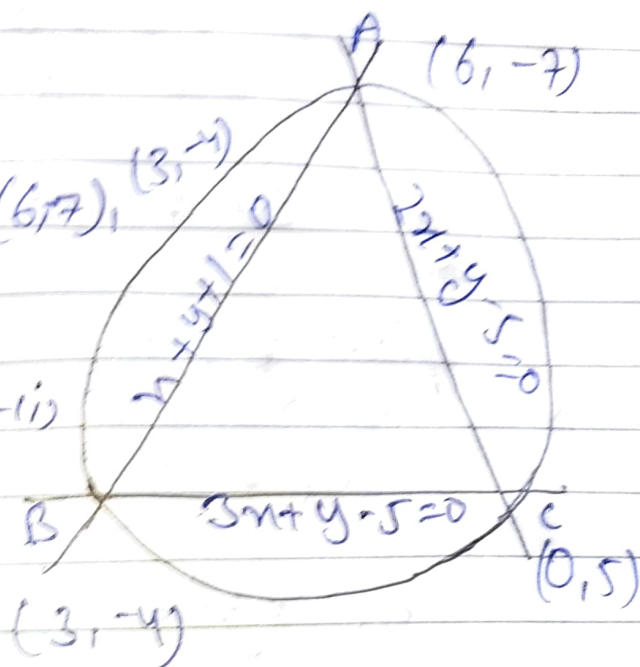


Ans - Sides of triangle, $x+y+1=0$ - (i)
 $3x+y-5=0$ - (ii)
 $2x+y-5=0$ - (iii)

eqn, (i), (ii), (iii)

Δ as $(3, -4)$, $(0, 5)$ & $(6, 7)$

$$x^2 + y^2 + 2gx + 2fy + c = 0 \text{ - (i)}$$



$$25 + 6g - 8f + c = 0 \text{ - (2)}$$

$$25 + 16f + c = 0 \text{ - (3)}$$

$$85 + 12g - 14f + c = 0 \text{ - (4)}$$

from (2) - (3) :-

$$6g - 18f = 0 \Rightarrow g = 3f \text{ - (5)}$$

from (4) - (3);

$$60 + 12g - 24f = 0$$

$$g - 2f + 5 = 0 \text{ - (6)}$$

(i) putting the value of g from eqn (5) & (6);

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

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

put $f = -5$

$$c = -25 + 50 = 25$$

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

required circle