Date.....

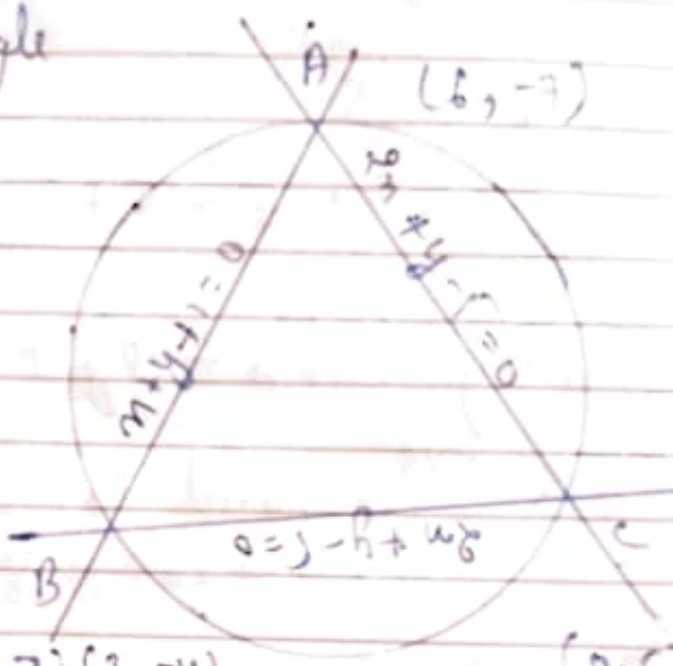
A_2, B_2, C_2 are the direction ratios of normal t
the planes.

Qu6 :-

Ans

Sides of triangle

$x+y+1=0$
$3x+y-5=0$
$2x+y-5=0$



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

Δ, as $(3,-4)$, $(0,5)$ & $(6,-7)$ $(3,-4)$

$x^2+y^2+2gx+2fy+c=0$ ——— (1)

$25+6g-8f+c=0$ ——— (2)
$25+16f+c=0$ ——— (3)
$85+12g-14f+c=0$ ——— (4)

From (2) − (3) :-

$6g-18f=0 \Rightarrow g=3f$ ——— (5)

From (4) − (3) :- $60+12g-24f=0 \Rightarrow g-2f+$

Date.....

putting the value of g from eq. (1) in (3)

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

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

put $f = -5$

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

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

required Circle.