#9)

THE CENTER WOULD BE THE MIDPOINT
OF $(1,8)$ AND $(9,-4)$ WHICH IS

$$\left(\frac{1+9}{2}, \frac{8+(-4)}{2} \right) = (5,2)$$

THE RADIUS IS THEN THE DISTANCE
BETWEEN $(5,2)$ AND, SAY, $(1,8)$

$$\sqrt{(5-1)^2 + (2-8)^2} = \sqrt{52}$$

SO EQ OF CIRCLE IS

$$(x-5)^2 + (y-2)^2 = \left(\sqrt{52}\right)^2$$

$$(x-5)^2 + (y-2)^2 = 52$$