Algebra 2 | Tues. 2-12-13 | Class Notes

Homework Review — Pg 826

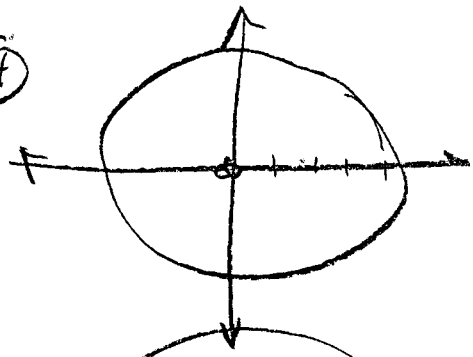
② $C(6, -5)$, $r = 4$

$$(x-6)^2 + (y+5)^2 = 16$$

③ $C(-11, 3)$, $r = 9$

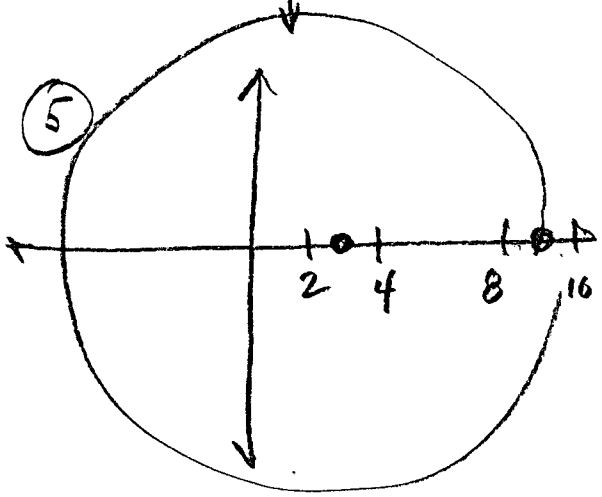
$$(x+11)^2 + (y-3)^2 = 81$$

④



$$x^2 + y^2 = 64$$

⑤



$$(x-3)^2 + y^2 = 36$$

(6) $C(-1,9)$ containing $(2,5)$ — h, k

$(-1,9), (2,5)$

$r^2 = (5-9)^2 + (2+1)^2$

$r^2 = 16 + 9$

$r^2 = 25$

* $(x+1)^2 + (y-9)^2 = 25$

$(x-h)^2 + (y-k)^2 = r^2$ (2)

(7.) $C(-2,-5), (-10,-20)$

$(x+2)^2 + (y+5)^2 = 289$

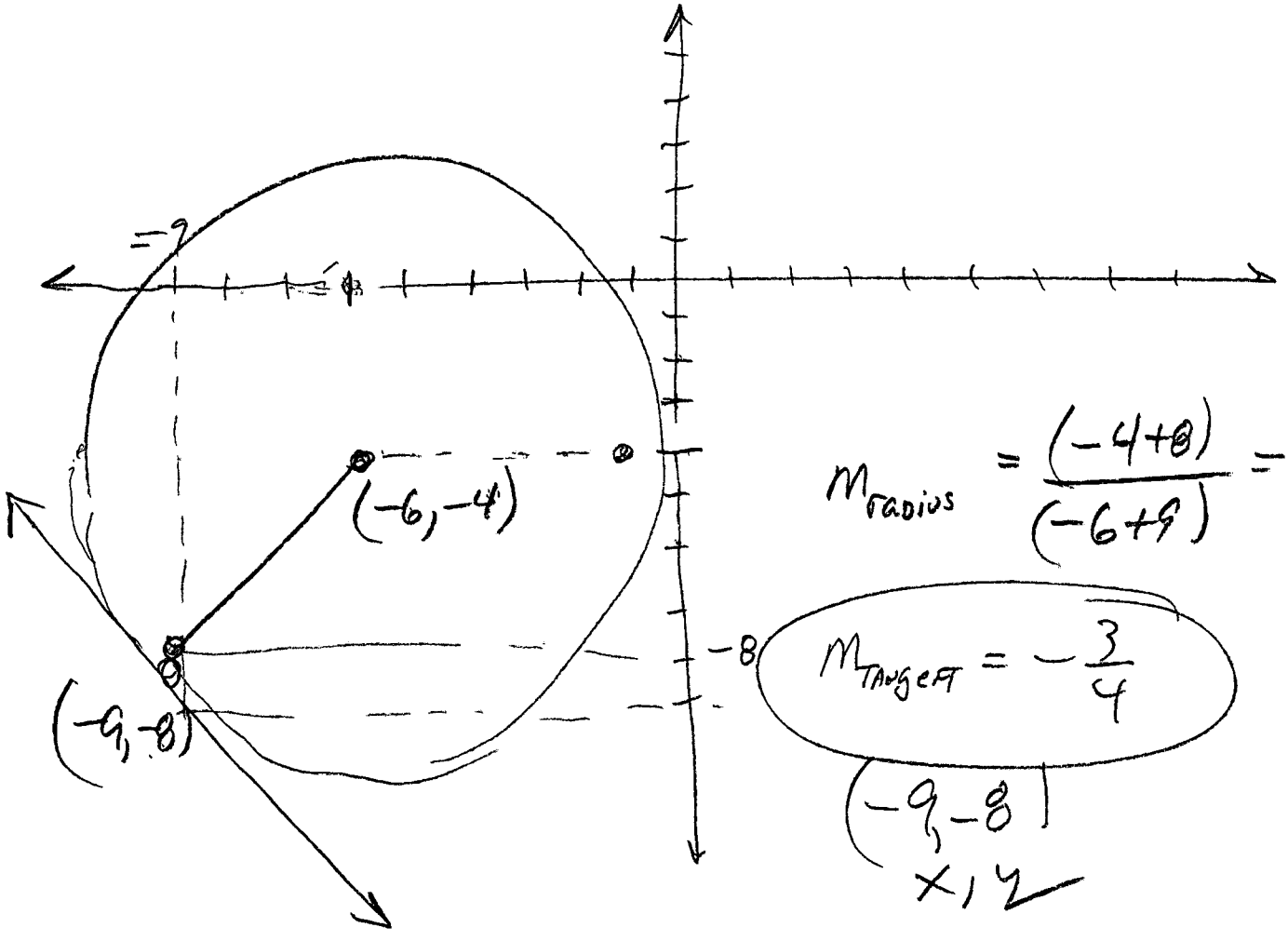
$(-15)^2 + (-8)^2 = r^2$

$225 + 64 = r^2$

$289 = r^2$

(11) $(x+6)^2+(y+4)^2=25$, POT $(-9,-8)$

EQL TANGENT TO ⊙ AT ↗



$m_{\text{RADIUS}} = \frac{(-4+8)}{(-6+9)} = \frac{4}{3}$

$m_{\text{TANGENT}} = -\frac{3}{4}$

$(-9,-8)$

x, y

$y = mx + b$

$-8 = -\frac{3}{4}(-9) + b$

$-\frac{32}{4} = -8 = \frac{27}{4} + b$

$-\frac{27}{4} \qquad -\frac{27}{4}$

$-\frac{59}{4} = b$

$y = -\frac{3}{4}x - \frac{59}{4}$

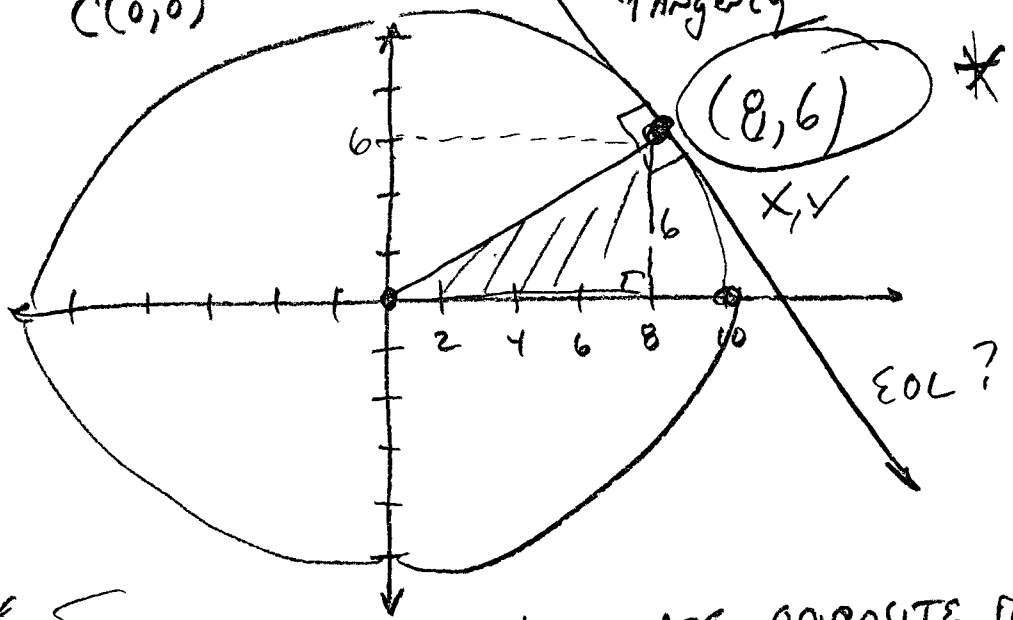
$y = mx + b$

(10) WRITE EQL tangent to each circle AT given point.

$x^2 + y^2 = 100$

$C(0,0)$

POINT $\Rightarrow (8,6)$ OF TANGENCY



* { SLOPES OF $\perp$ LINES ARE OPPOSITE RECIPROCALS } *

SLOPE $\Rightarrow$ radius $= \frac{6}{8} = \frac{3}{4}$ $\quad m_\perp = -\frac{4}{3}$

$y = mx + b$

$6 = \frac{-4}{3}(8) + b$

$\frac{18}{3} = 6 = -\frac{32}{3} + b$

$+\frac{32}{3} \qquad +\frac{32}{3}$

$\frac{50}{3} = b$

$y = -\frac{4}{3}x + \frac{50}{3}$