

Circles in Coordinate Plane

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

Center: (h, k)

Radius = r

EX \rightarrow C: $(5, -2)$

$r = 7$

$(x-5)^2 + (y-(-2))^2 = 7^2$

$(x-5)^2 + (y+2)^2 = 49$

EX \rightarrow C: $(6, -2)$

$r = 3$

$(x-6)^2 + (y-(-2))^2 = 3^2$

$(x-6)^2 + (y+2)^2 = 9$

EX \rightarrow C: $(3, -5)$

$r = \sqrt{13}$

$(x-3)^2 + (y-(-5))^2 = (\sqrt{13})^2$

$(x-3)^2 + (y+5)^2 = 13$

$$\underline{\text{EX}} \rightarrow (x+2)^2 + (y+4)^2 = 64$$

$$C: (-2, -4)$$

$$r = \sqrt{64} = 8$$

$$\underline{\text{EX}} \rightarrow x^2 + (y+7)^2 = 50$$

$$C: (0, -7)$$

$$r = \sqrt{50} = \sqrt{25} \cdot \sqrt{2} = \boxed{5\sqrt{2}}$$

$$\underline{\text{EX}} \rightarrow (x-3)^2 + y^2 = 37$$

$$C: (3, 0)$$

$$r = \sqrt{37}$$