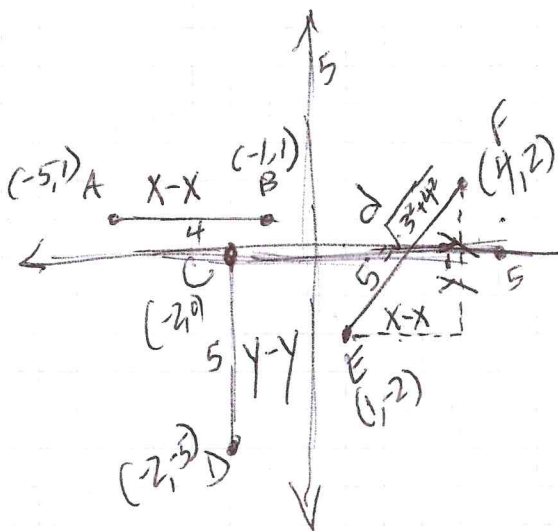


Derive Distance Formula



$$\sqrt{(x-x)^2 + (y-y)^2} = d^2$$

$$a^2 + b^2 = c^2$$

$$d = \sqrt{(x-x)^2 + (y-y)^2}$$

distance formula

X(-2, 4) Y(6, 10)

$$\sqrt{(-2-6)^2 + (4-10)^2}$$

$$\sqrt{(-8)^2 + (-6)^2}$$

$$\sqrt{64 + 36} = \sqrt{100} = 10$$

Equation of a Circle



$$r = \sqrt{(x-h)^2 + (y-k)^2}$$

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

(h, k) = center

r = radius

Center $(2, -3)$

$$r = 5$$

$$y = mx + b$$

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

$$(x+3)^2 + y^2 = 49 \quad r = 7$$

center $(-3, 0)$

HW #10

p 489: 1-3, 5-10

on 1-3, 5-6 use distance formula