

CirclesWriting in standard form

$$x^2 + y^2 - 4x + 8y - 20 = 0$$

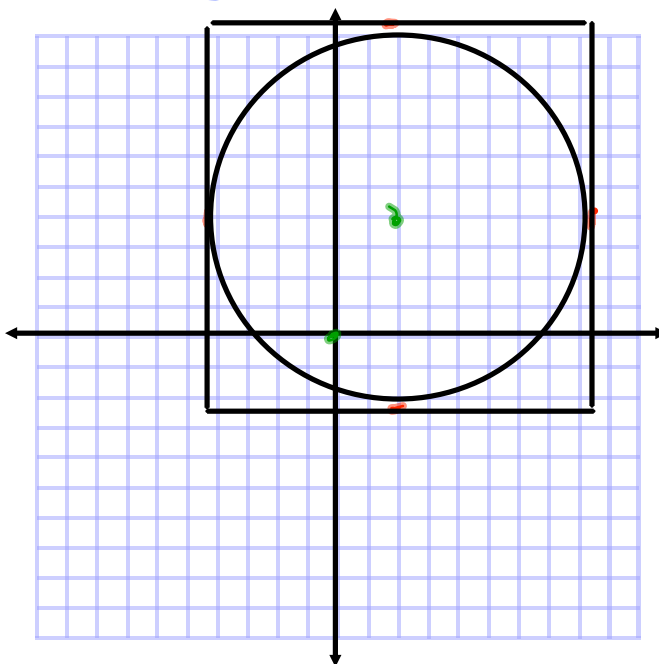
$$(x-h)^2 + (y-k)^2 = r^2$$

$$x^2 - 4x + y^2 + 8y = 20$$

$$x^2 - 4x + 4 + y^2 + 8y + 16 = 20 + 16 + 4$$

$$(x-2)^2 + (y+4)^2 = 40$$

Ex 6.3

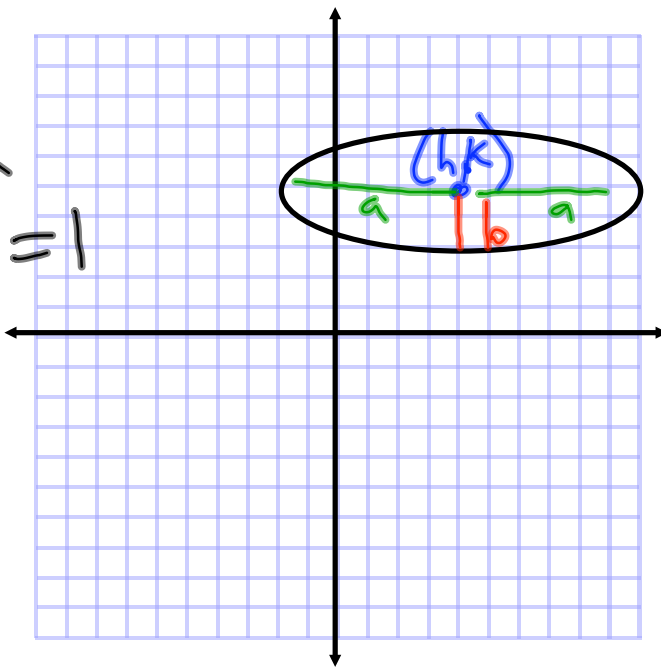


Ellipse

Standard form eqn

$$\frac{(x-h)^2}{a^2} + \frac{(y-k)^2}{b^2} = 1$$

$$\frac{(x+3)^2}{4} + \frac{(y-1)^2}{9} = 1$$



Sketch the following ellipse

$$\frac{(x-2)^2}{16} + \frac{(y+4)^2}{4} = 1$$

P.150
7, 8, 14, 16

Domain:

$$-2 \leq x \leq 6$$

Range:

$$-6 \leq y \leq -2$$

