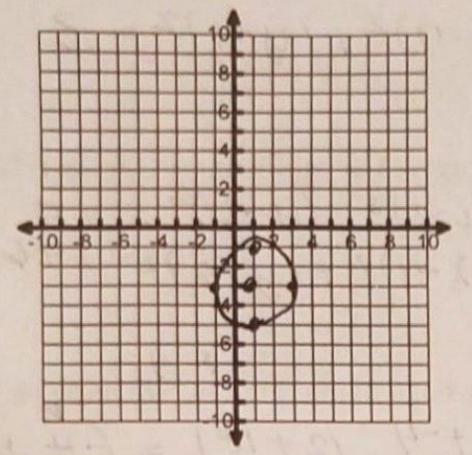
GSE PreCalculus: Unit 2 – Conics
WS 2.1: Circles

Name_____
Date_____ Block____

Identify the center and radius of each graph. Then sketch the graph.

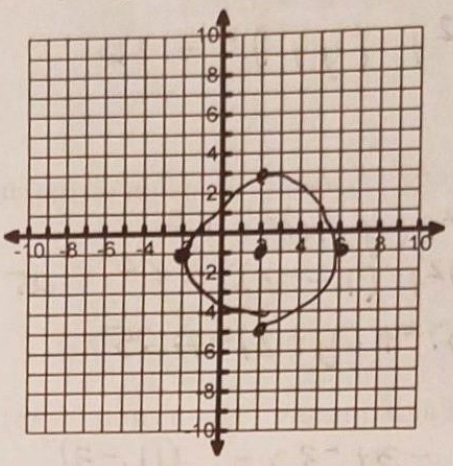
1. $(x-1)^2+(y+3)^2=4$

Center: (1, -3)
r = 2



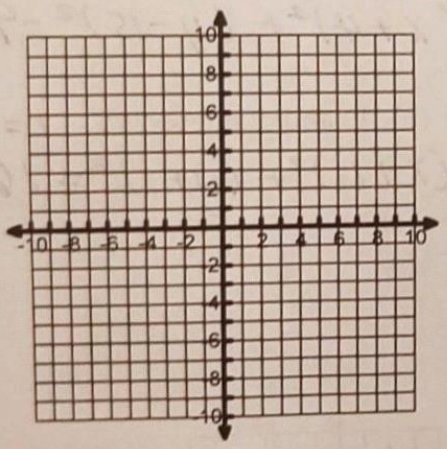
2. $(x-2)^2+(y+1)^2=16$

Center: (2, -1)
r = 4



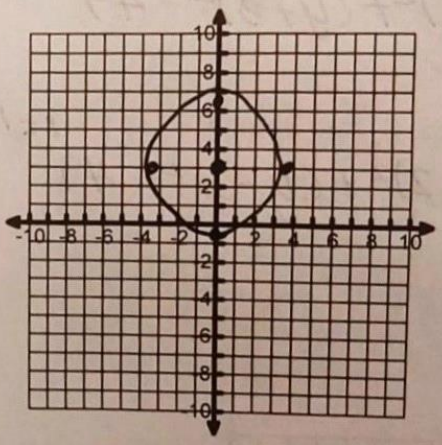
3. $(x-1)^2+(y+4)^2=9$

Center: (1, -4)
r = 3



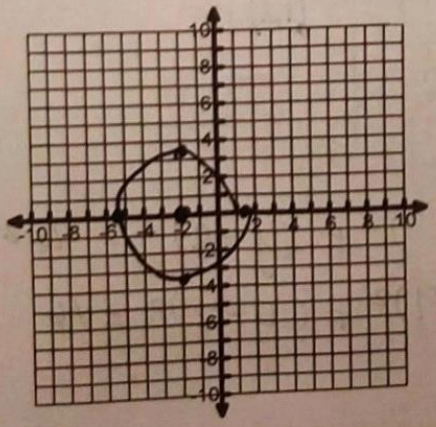
4. $x^2+(y-3)^2=14$

Center: (0, 3)
r = $\sqrt{14}$ (3.7)



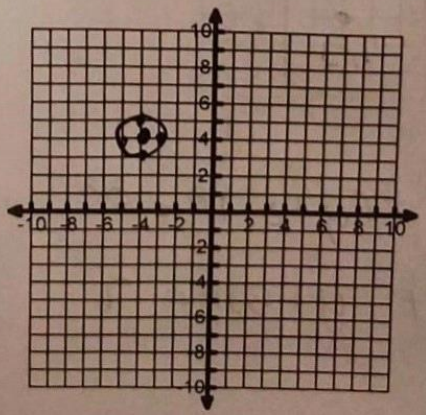
5. $(x+2)^2+y^2=10$

Center: (-2, 0)
r = $\sqrt{10}$ (3.2)



6. $(x+4)^2+(y-4)^2=1$

Center: (-4, 4)
r = 1



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From the given information, write the equation of each circle in Standard Form

7. Center (2, -1), radius = 4

$(x-2)^2+(y+1)^2=16$

8. Center (7, -1), radius = $\sqrt{3}$

$(x-7)^2+(y+1)^2=3$

9. Center (3, -2), and (-1, 1) is a point on the circle

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

$(-1-3)^2+(1--2)^2=r^2 \quad 25=r^2$

$(x-3)^2+(y+2)^2=25$

10. Center: (1,6) and Point on Circle: (-10, 11)

$(-10-1)^2+(11-6)^2=r^2$

$(x-1)^2+(y-6)^2=146$

11. Ends of a diameter: (18, -3) and (4, -3)

$\left(\frac{18+4}{2}, \frac{-3+-3}{2}\right)=(11,-3)$

$(18-11)^2+(-3+3)^2=r^2=49$

$(x-11)^2+(y+3)^2=49$

12. Ends of a diameter: (-4, 12) and (-4, 18)

$\left(\frac{-4+-4}{2}, \frac{12+18}{2}\right)=(-4,15)$

$(-4+4)^2+(12-15)^2=9 \quad r^2=9$

$(x+4)^2+(y-15)^2=9$

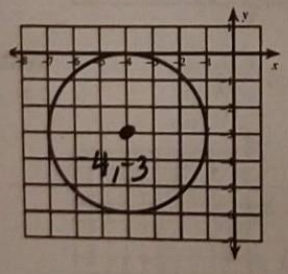
13. Center (2, 3) and diameter is 14. $r=14/2=7$

$(x-2)^2+(y-3)^2=49$

14. Center (-6,-1) and diameter is 8. $r=8/2=4$

$(x+6)^2+(y+1)^2=16$

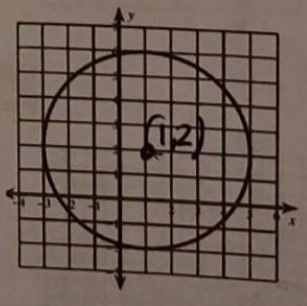
15.



$(x+4)^2+(y+3)^2=3^2$

$(x+4)^2+(y+3)^2=9$

16.



$(x-1)^2+(y-2)^2=4^2$

$(x-1)^2+(y-2)^2=16$