**7.2 Circle Equations**

Write an equation of a circle with the given center point and radius:

1. (2, 3), r = 5

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

2. (-3, 0), r=2.5

$(x+3)^2+y^2=6.25$

State the center point and radius for the circle which has equation:

3. $(x-1)^2+y^2=36$

(1,0) r=6

5. $x^2+(y+7)^2=20$

(0,-7) $r=\sqrt{20}=2\sqrt{5}$

4. $(x+2)^2+(y-6)^2=256$

(-2,6) r=16

6. $(x-3)^2+(y+12)^2=169$

(3,-12) r=13

7. Write the equation of a circle with center (-1, 4) and containing the point (5, -4).

$r=\sqrt{(4-^-4)^2+(-1-5)^2}$

$r=\sqrt{292}$

$(x+1)^2+(y-4)^2=292$

Use completing the square method to write each equation in standard form, then state the center point and radius, and graph the circle in a coordinate plane.

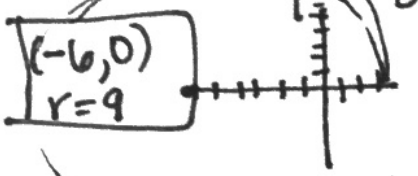
8. $x^2+y^2+12x=45$

$x^2+12x \quad +y^2=45$

$(x^2+12x+36)+y^2=45+36$

$(x+6)^2+y^2=81$

(-6,0)
r=9



9. $x^2+y^2+14y=-13$

$x^2+(y^2+14y+49)=-13+49$

$x^2+(y+7)^2=36$

Center (0,-7) r=6

10. $x^2+y^2-2x+6y=3$

$x^2-2x \quad +y^2+6y=3$

$(x^2-2x+1)+(y^2+6x+9)=3+1+9$

$(x-1)^2+(y+3)^2=13$

(1,-3) $r=\sqrt{13}$

11. $x^2+y^2-10x+8y=56$

$x^2-10x \quad +y^2+8y=56$

$(x^2-10x+25)+(y^2+8y+64)=145$

$(x-5)^2+(y+4)^2=145$

Center (5,-4)
$r=\sqrt{145}$

**7.3 Angles**

*Draw each*

1. $120^0$

5. 1125

*Find one p*
*given ang*

9. $415^o$

*Find the c*

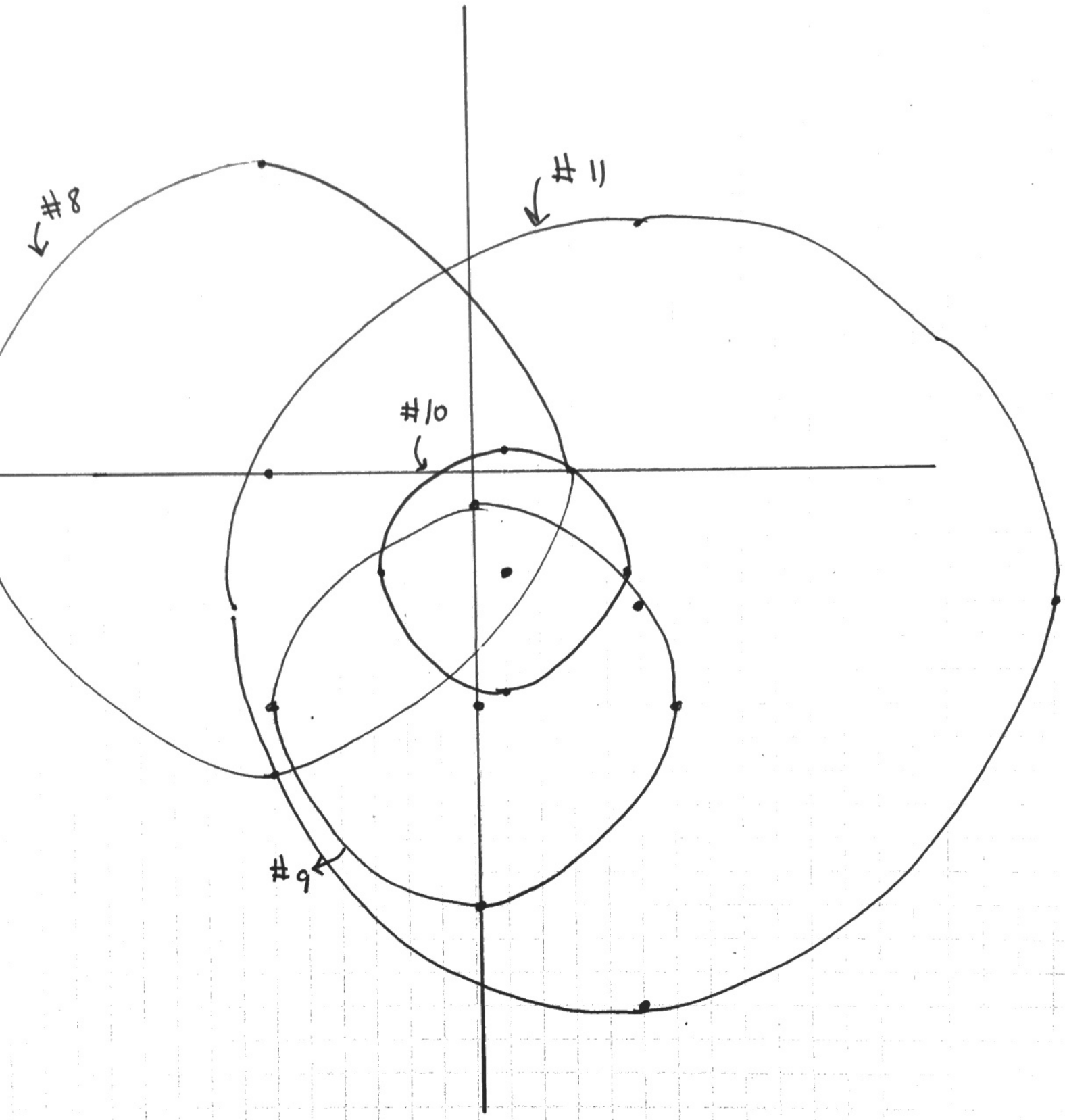
13. $85^o$

*Convert e*

17. $18^o$

*Convert e*

21. $\frac{\pi}{9}$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