Struggle & Progress, _____ Date_____ Period ___

Mathematics 3 for College Graduates **Day 1 Homework**

Topic: Conics & Intro to Circles **Unit 2: Conics**

Checkout: msgiwa1.weebly.com and twitter.com/msgiwa1 for help & updates!

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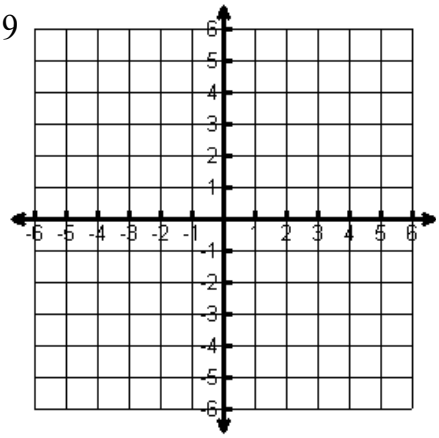
1. $x^2 + y^2 = 9$

Center: _____

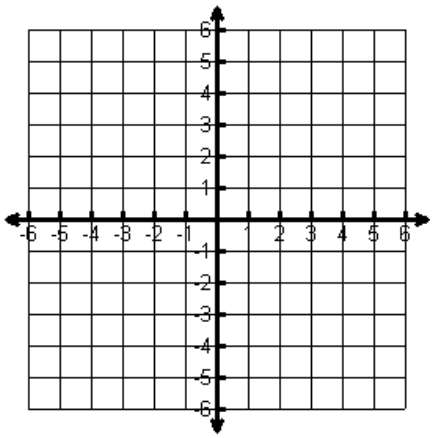
Radius: _____



2. $x^2 + y^2 = 20$

Center: _____

Radius: _____



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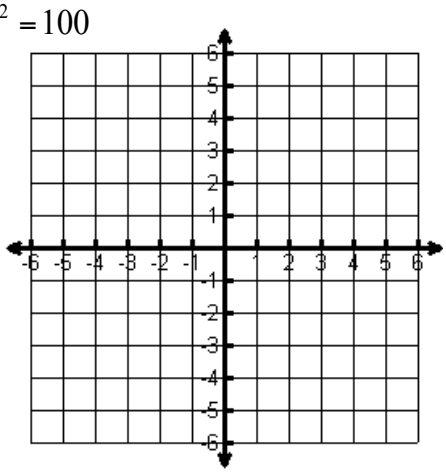
3. $4x^2 + 4y^2 = 100$

Center: _____

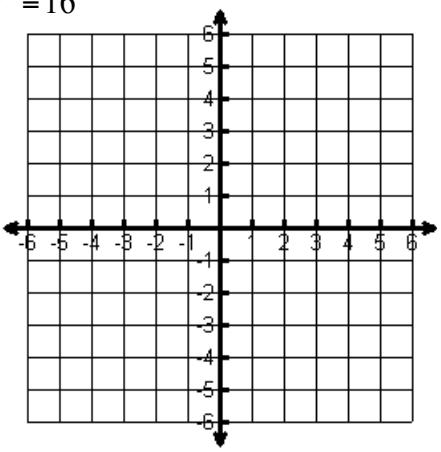
Radius: _____



4. $(x+2)^2 + y^2 = 16$

Center: _____

Radius: _____



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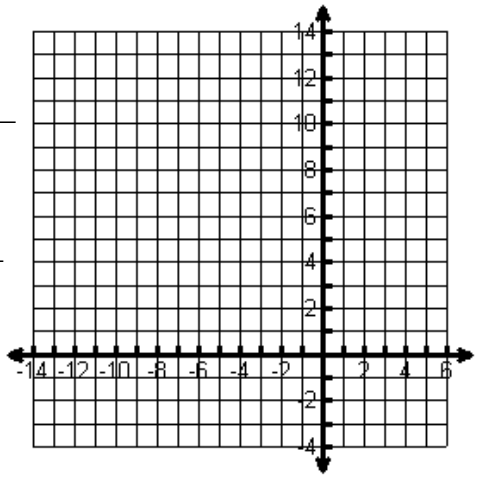
5. $(x+4)^2 + (y-6)^2 = 64$

Center: _____

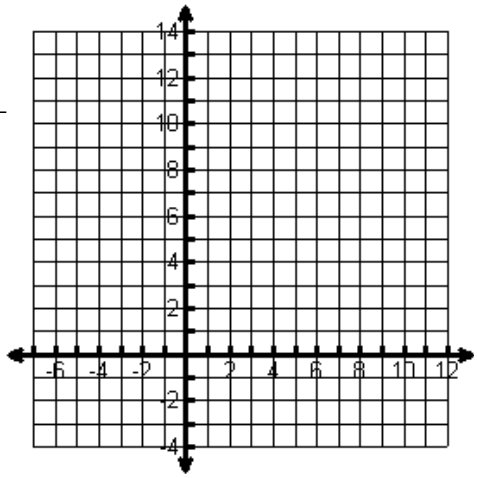
Radius: _____



6. $(x-3)^2 + (y-5)^2 = 50$

Center: _____

Radius: _____



Find the value of c that makes this a Perfect Square Trinomial, then write the expression as the square of a binomial.

7. $x^2 - 6x + c$

8. $x^2 + 8x + c$

9. $x^2 - 7x + c$

Set up the equation as a perfect square trinomial by completing the square.

10. $x^2 - 10x - 5 = 0$

11. $2x^2 + 12x + 16 = 0$

12. $3x^2 - 6x = 7$

Write the standard equation for the circle. State the center and radius.

13. $x^2 + 2x + y^2 - 10y + 10 = 0$

14. $x^2 + y^2 - 4x + 6y + 9 = 0$

15. $x^2 + y^2 - 10x - 12y + 40 = 0$

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

17. $7x^2 + 7y^2 - 28y + 14 = 0$

18. $3x^2 + 3y^2 + 18x + 6y = 0$

Use the discriminant to classify the following conics in general form.

20. $2x^2 + 5x + y + 14 = 0$

21. $4x^2 + 4y^2 - 5x + 8y - 10 = 0$

22. $54x^2 - 5y^2 + 4x - 3y + 4 = 0$

23. $x^2 + 4y^2 - 8x - 12y - 2 = 0$