



PROBLEMS AND SOLUTIONS - AN INTRODUCTION TO CONIC SECTIONS
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PLEASE NOTE THAT YOU CANNOT ALWAYS USE A CALCULATOR ON THE ACCUPLACER - COLLEGE-LEVEL MATHEMATICS TEST! YOU MUST BE ABLE TO DO SOME PROBLEMS WITHOUT A CALCULATOR!

The following are equations of conic sections in general form. Identify them by name (circle, ellipse, parabola, hyperbola).

Problem 1:

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

Problem 2:

$$4x^2 + 9y^2 = 36$$

Problem 3:

$$-4x^2 + 9y^2 = 36$$

Problem 4:

$$y = \frac{1}{8}x^2$$

Problem 5:

$$x = \frac{1}{8}y^2$$

Problem 6:

$$9x^2 + 4y^2 = 36$$

Problem 7:

$$y = 4x^2 - 3x - 16$$

Problem 8:

$$x^2 + y^2 - 2x - 7 = 0$$

Problem 9:

$$4x^2 - 6y^2 + 7y = 9$$

Problem 10:

$$4x^2 + 6y^2 - 3x + 7y = 16$$

Problem 11:

$$x = -\frac{1}{8}y^2$$

Problem 12:

$$4x^2 - 9y^2 = 36$$

Problem 13:

$$x = 6y^2 + 7y + 5$$

AC = 0 - parabola (A = 0) !!!

Problem 14:

$$-4x^2 + y^2 - 3x + 7y = 3$$

AC = -4 < 0 - hyperbola

Problem 15:

$$y = -\frac{1}{8}x^2$$

AC = 0 - parabola (C = 0) !!!



SOLUTIONS

You can find detailed solutions below the link for this problem set!

1. Circle	2. Ellipse	3. Hyperbola
4. Parabola	5. Parabola	6. Ellipse
7. Parabola	8. Circle	9. Hyperbola
10. Ellipse	11. Parabola	12. Hyperbola
13. Parabola	14. Hyperbola	15. Parabola