EXTRA PRACTICE — Exercises

Unit IX – The Conic Sections
Part C – Ellipses
Lesson 2 – Ellipses - Not Standard Form

Graph each of the following second-degree equations, determining whether the solution set graph will be a parabola, a circle, or an ellipse. Then graph each solution set, identifying the important parts of each.

1. $16x^2 + 25y^2 = 400$

2. $12(x-1)^2 + 3(y+2)^2 = 48$

3. $4x^2 + 9y^2 = 36$

4. $(x+3)^2 + 4(y+1)^2 - 10 = 6$

5. $8(x+1)^2 + (y+1)^2 - 12 = 4$

EXTRA PRACTICE — Answer Key

Unit IX – The Conic Sections
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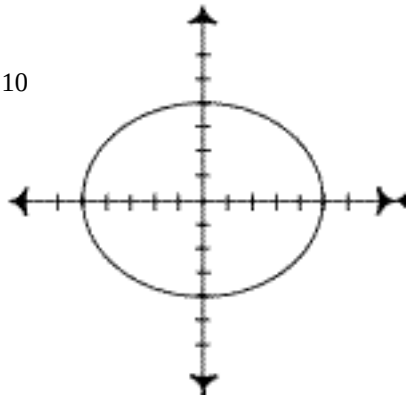
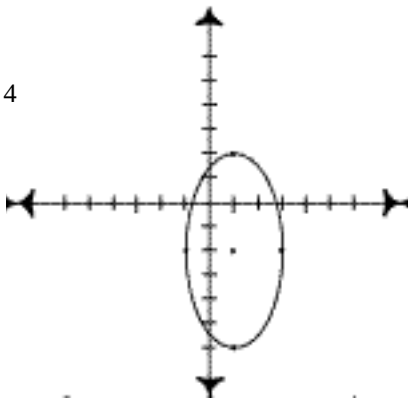
Graph each of the following second-degree equations, determining whether the solution set graph will be a parabola, a circle, or an ellipse. Then graph each solution set, identifying the important parts of each.

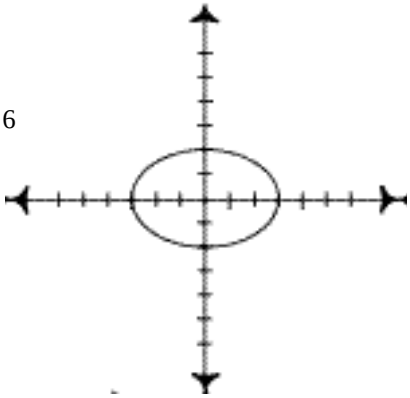
1. center (0,0)
   a = 5, b = 4
   Horizontal axis = 10
   Vertical axis = 8



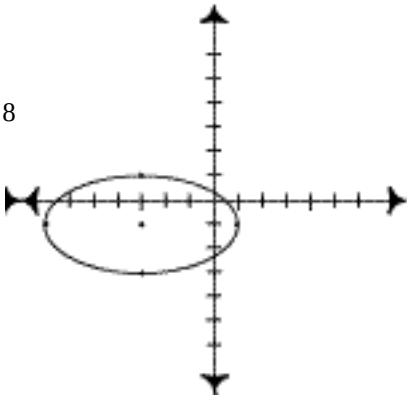
2. center (1,−2)
   a = 2, b = 4
   Horizontal axis = 4
   Vertical axis = 8



3. center (0,0)
   a = 3, b = 2
   Horizontal axis = 6
   Vertical axis = 4



4. center (−3,−1)
   a = 4, b = 2
   Horizontal axis = 8
   Vertical axis = 4



5. center (−1,−1)
   a = $\sqrt{2}$, b = 4
   Horizontal axis = $2\sqrt{2}$
   Vertical axis = 8