Homework #73 **Answers**

From Houghton-Mifflin Precalculus 3rd Edition

p710-711:

1) center: (0, 0), vertical, a = 3, b = 2 ...choice (b)

2) center: (0, 0), horizontal, a = 3, b = 2 ...choice (c)

3) center: (0, 0), vertical, a = 5, b = 2 ...choice (d)

4) circle with center at (0, 0) and r = 2 ...choice (f)

5) center: (2, -1), horizontal, a = 4, b = 1 ...choice (a)

6) center: (-2, -2), horizontal, a = 3, b = 2 ...choice (e)

29) vertices: (-6, 0), (6, 0), foci: (-2, 0), (2, 0)
horizontal, center: (0, 0), a = 6, c = 2, $4 = 36 - b^2$, $b^2 = 32$
equation: $\frac{x^2}{36} + \frac{y^2}{32} = 1$

32) foci: (-2, 0), (2, 0), major axis length 8
horizontal, center: (0, 0), c = 2, a = 4, $4 = 16 - b^2$, $b^2 = 12$
equation: $\frac{x^2}{16} + \frac{y^2}{12} = 1$

41) foci: (0, 0), (0, 8), major axis length 16
vertical, center: (0, 4), c = 4, a = 8, $16 = 64 - b^2$, $b^2 = 48$
equation: $\frac{x^2}{48} + \frac{(y - 4)^2}{64} = 1$

44) center: (3, 2), a = 3c, foci: (1, 2), (5, 2)
horizontal, 2c = 4, c = 2, a = 6, $4 = 36 - b^2$, $b^2 = 32$
equation: $\frac{(x - 3)^2}{36} + \frac{(y - 2)^2}{32} = 1$