Example a) Ellipses p. 5 Ch 11

Putting into the correct form

$$4x^2 + y^2 = 16$$

- 1st the constant must be 1 so divide all terms by 16

$$4x^2 {}_{/16} + y^2 {}_{/16} = 16 {}_{/16}$$

The Correct Form Is:

$$\frac{x^2}{4} + \frac{y^2}{16} = 1$$

Meaning: $a^2 = 16$ & $b^2 = 4$
so, this ellipse has a major axis that is vertical