Example b) Ellipses p. 5 Ch 11

Putting into the correct form

$$9x^2 + 4y^2 = 1$$

- Since the constant is already 1, the numeric coefficients of x^2 and y^2 must be seen as a^2 & b^2 by dividing the numerator and denominator by the numeric coefficient.
- Start with giving each term a denominator.

$$\frac{9x^2}{1} + \frac{4y^2}{1} = 1$$

Finish Finding a^2 & b^2

- Divide numerator & denominator of each term by the numeric coefficient of the squared term

$$\frac{9/9\ x^2}{1/9} + \frac{4/4\ y^2}{1/4} = 1$$

The Correct Form Is:

$$\frac{x^2}{1/9} + \frac{y^2}{1/4} = 1$$

Meaning: $a^2 = 1/4$ & $b^2 = 1/9$
and this means it has a vertical major axis