



1) The force between 2 bodies:

$$F = G \cdot m_1 \cdot m_2 / R^2$$

G - gravitational constant

m₁, m₂ – masses of bodies

R – distance between them

For body (0, 0) and (0, 2.4)

$$F_1 = G \cdot 1.5 \cdot 2.9 / (2.4)^2 = 5.04 \times 10^{-11} \text{H}$$

For body (0, 0) and (3.5, 0)

$$F_1 = G \cdot 1.5 \cdot 4 / (3.5)^2 = 3.27 \times 10^{-11} \text{H}$$

$$|F_1 + F_1| = \sqrt{F_1^2 + F_2^2} = 6 \times 10^{-11} \text{H}$$

2) The angle respect the positive x axis:

$$\tan(\alpha) = \frac{5.04 \times 10^{-11}}{3.27 \times 10^{-11}} = 1.54$$

$$\alpha = \tan^{-1} 1.54 = 57$$