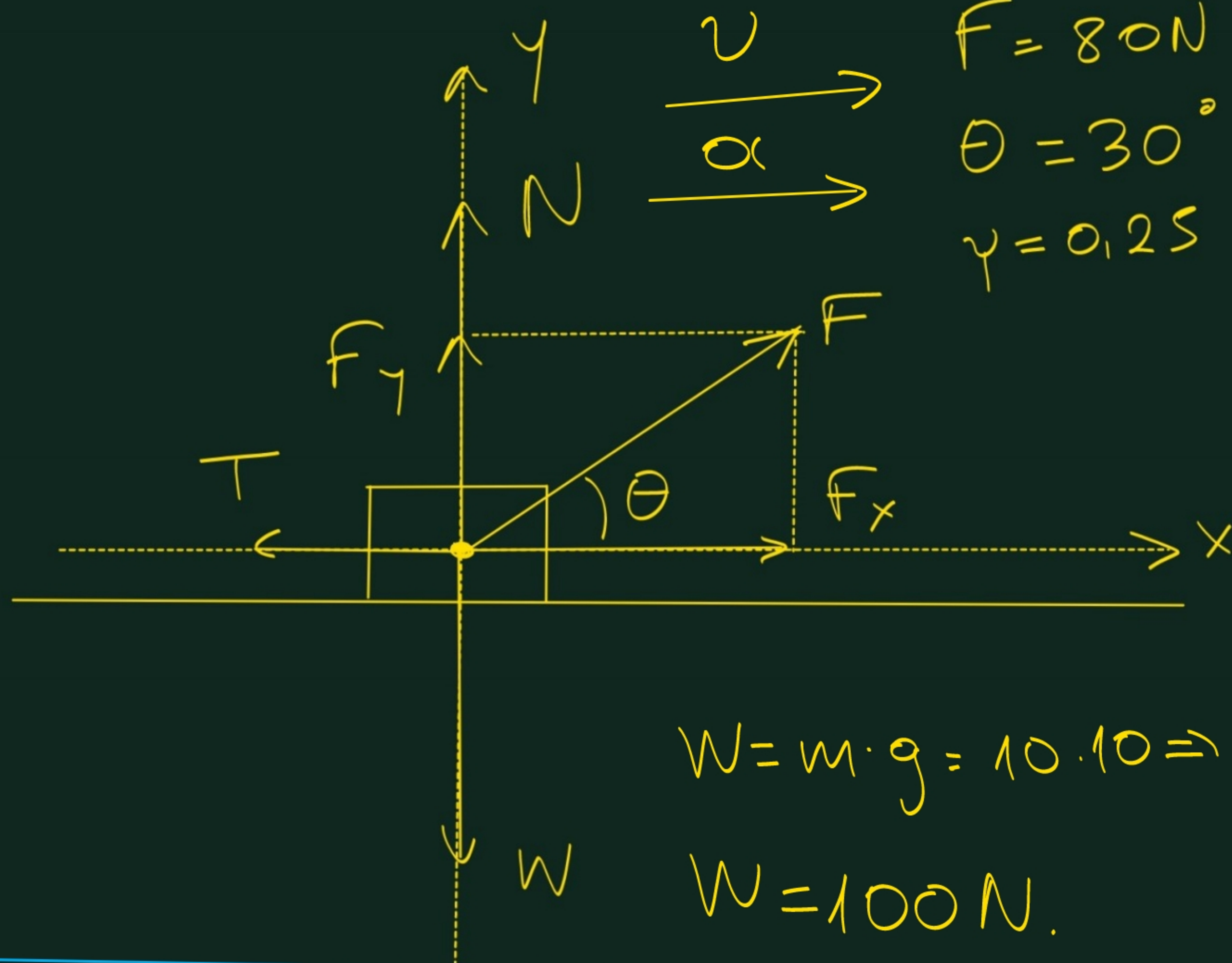


Παράδειγμα 682.128-129.



$$\sum F_y = 0 \Rightarrow N + F_y - W = 0 \Rightarrow$$

$$N + 40 - 100 = 0 \Rightarrow N = 100 - 40 \Rightarrow N = 60 \text{ N}$$

Normal
force

Newton.

$$a) \sin \theta = \frac{F_x}{F} \Rightarrow \sin 30^\circ = \frac{F_x}{80} \Rightarrow$$

$$\frac{\sqrt{3}}{2} = \frac{F_x}{80} \Rightarrow F_x = 40\sqrt{3} \text{ N}$$

$$\sqrt{3} \approx 1,7$$

$$F_x = 40 \cdot 1,7 \Rightarrow F_x = 68 \text{ N}$$

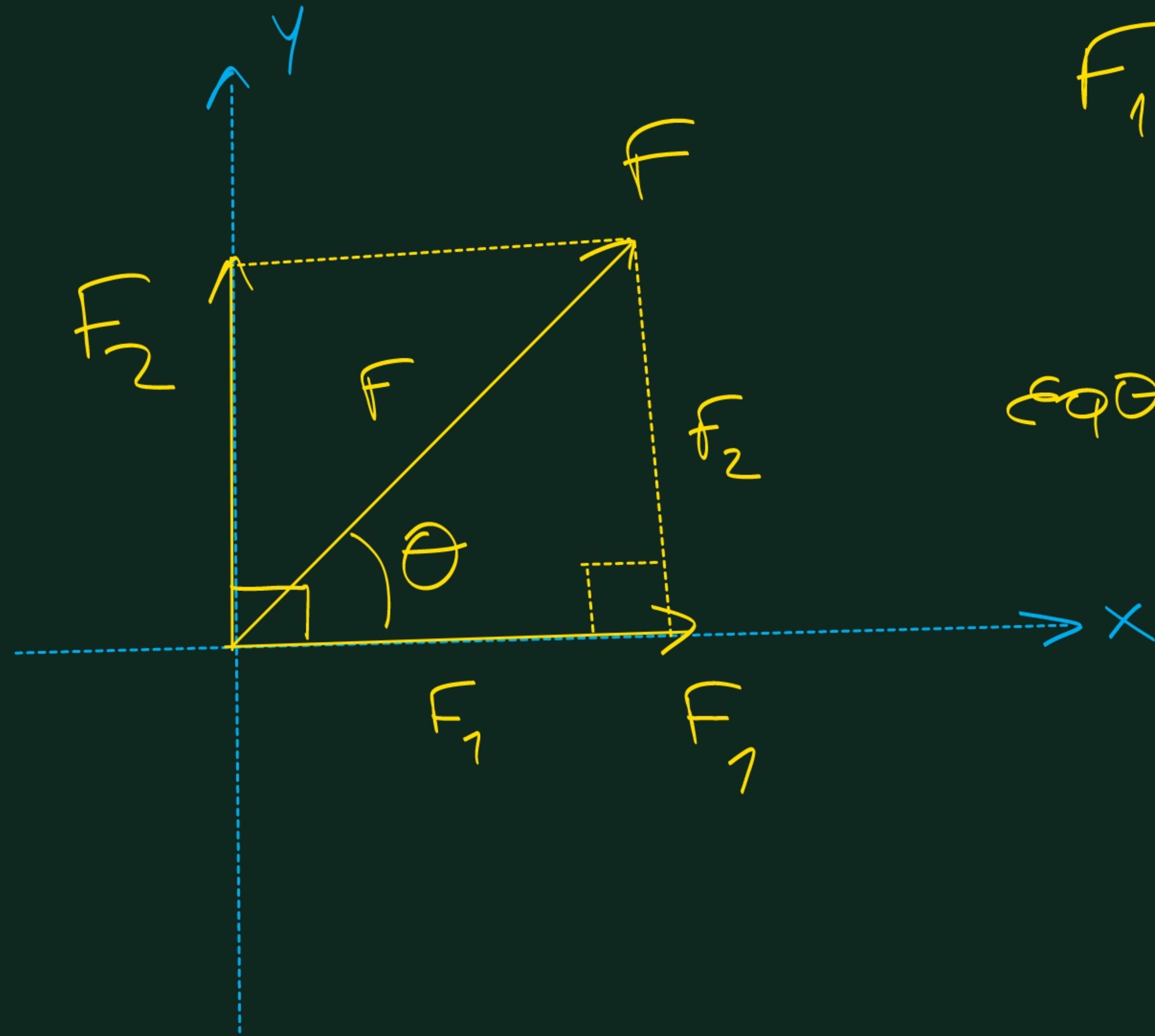
$$\cos \theta = \frac{F_y}{F} \Rightarrow \cos 30^\circ = \frac{F_y}{80} \Rightarrow$$

$$\frac{1}{2} = \frac{F_y}{80} \Rightarrow F_y = 40 \text{ N}$$

$$T = \gamma \cdot N = 0,25 \cdot 60 = 15 \Rightarrow$$

$$T = 15 \text{ N}$$

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$$F^2 = F_1^2 + F_2^2 \Rightarrow F^2 = 2F_1^2 \Rightarrow 10^2 = 2F_1^2 \Rightarrow F_1^2 = \frac{100}{2} \Rightarrow$$

$$F_1 = F_2$$

$$\cos \theta = \frac{F_2}{F} = 1 \Rightarrow$$
$$\theta = 45^\circ$$

$$F_1^2 = 50 \Rightarrow$$

$$F_1 = \sqrt{50} = \sqrt{25 \cdot 2} \Rightarrow$$

$$F_1 = 5\sqrt{2} \text{ N}$$

$$\text{uau } F_2 = 5\sqrt{2} \text{ N}$$