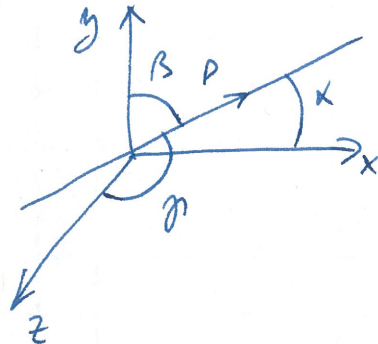
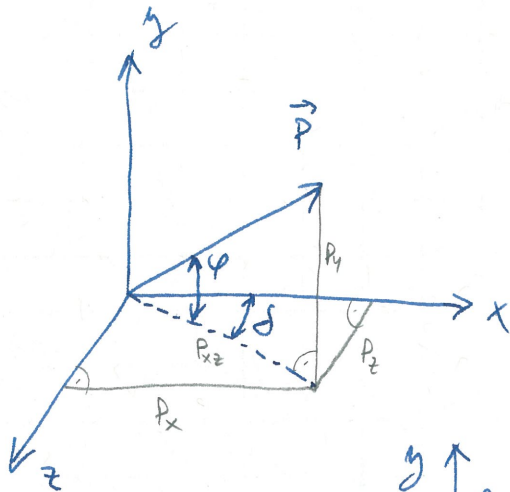


Vypočtete souřadnice síly  $\mathbf{P}$  a směrové úhly její nositelky.

Dáno: Velikost síly  $P = 850 \text{ N}$ , úhly  $\delta = 15^\circ$ ,  $\varphi = 20^\circ$ .



$$\begin{array}{l} D: P, \varphi, \delta \\ U: P_x, P_y, P_z, \alpha, \beta, \gamma \end{array}$$

$$P_y = P \sin \varphi$$

$$P_{xz} = P \cos \varphi \quad \dots \text{průmět síly } P \text{ do roviny } xz$$

$$P_x = P_{xz} \cos \delta = P \cos \varphi \cos \delta$$

$$P_z = P_{xz} \sin \delta = P \cos \varphi \sin \delta$$

$$\cos \alpha = \frac{P_x}{P} = \cos \varphi \cos \delta$$

$$\alpha = \arccos(\cos \varphi \cos \delta)$$

$$\cos \beta = \frac{P_y}{P} = \sin \varphi$$

$$\beta = \arccos(\sin \varphi)$$

$$\cos \gamma = \frac{P_z}{P} = \cos \varphi \sin \delta$$

$$\gamma = \arccos(\cos \varphi \sin \delta)$$