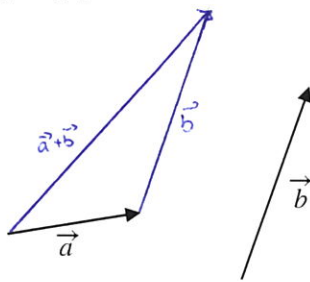


Arbeitsblatt zum Thema Kräfteaddition - Dynamik

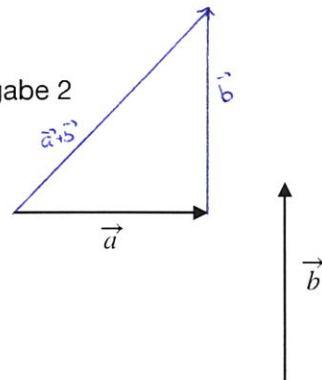
Addieren Sie die Kräfte graphisch zusammen und bestimmen Sie den Betrag der Gesamtkraft! Hier gilt 1cm = 1N.

Aufgabe 1



$$\begin{aligned} |\vec{a}| &= 1,8N \\ |\vec{b}| &= 2,7N \\ |\vec{a} + \vec{b}| &= 4N \end{aligned}$$

Aufgabe 2



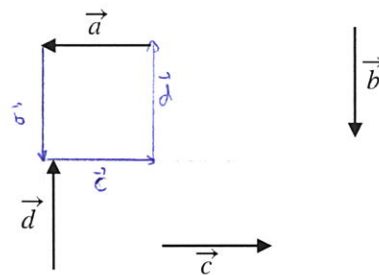
$$\begin{aligned} |\vec{a}| &= 2,6N \\ |\vec{b}| &= 2,6N \\ |\vec{a} + \vec{b}| &= 3,7N \end{aligned}$$

Aufgabe 3



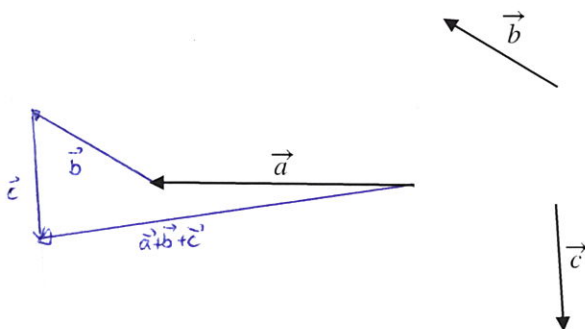
$$\begin{aligned} |\vec{a}| &= 1,5N \\ |\vec{b}| &= 1,5N \\ |\vec{a} + \vec{b}| &= 0N \end{aligned}$$

Aufgabe 4



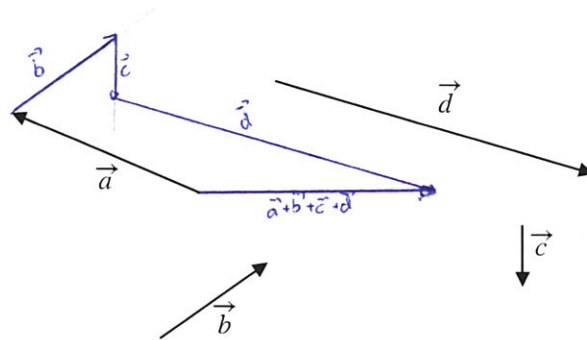
$$\begin{aligned} |\vec{a}| &= 1,5N \\ |\vec{b}| &= 1,5N \\ |\vec{c}| &= 1,5N \\ |\vec{d}| &= 1,5N \\ |\vec{a} + \vec{b} + \vec{c} + \vec{d}| &= 0N \end{aligned}$$

Aufgabe 5



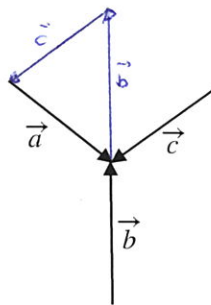
$$\begin{aligned} |\vec{a}| &= 3,5N \\ |\vec{b}| &= 1,8N \\ |\vec{c}| &= 1,7N \\ |\vec{a} + \vec{b} + \vec{c}| &= 5N \end{aligned}$$

Aufgabe 6



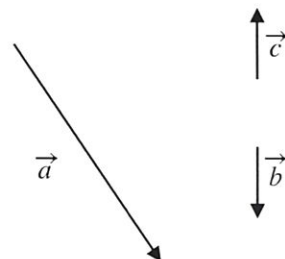
$$\begin{aligned} |\vec{a}| &= 2,7 \text{ N} \\ |\vec{b}| &= 1,7 \text{ N} \\ |\vec{c}| &= 0,9 \text{ N} \\ |\vec{d}| &= 4,4 \text{ N} \\ |\vec{a} + \vec{b} + \vec{c} + \vec{d}| &= 3,1 \text{ N} \end{aligned}$$

Aufgabe 7



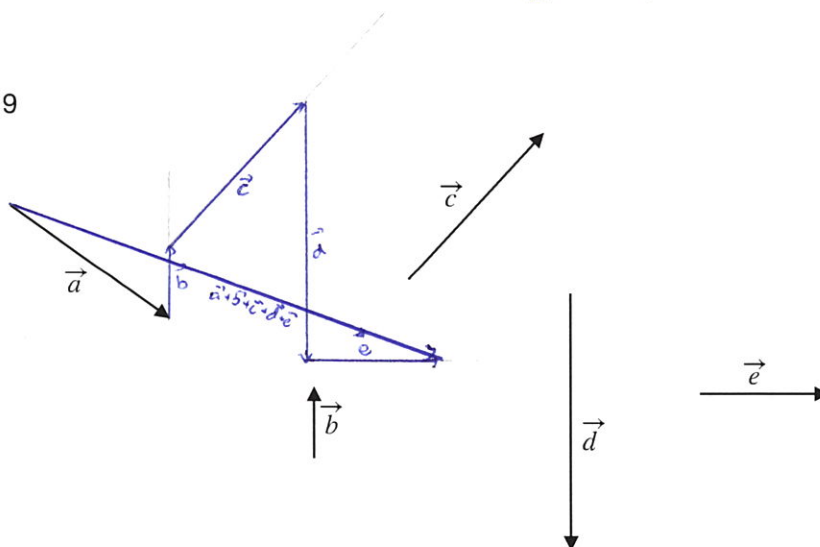
$$\begin{aligned} |\vec{a}| &= 1,7 \text{ N} \\ |\vec{b}| &= 1,9 \text{ N} \\ |\vec{c}| &= 1,6 \text{ N} \\ |\vec{a} + \vec{b} + \vec{c}| &= 0 \text{ N} \end{aligned}$$

Aufgabe 8



$$\begin{aligned} |\vec{a}| &= 3,4 \text{ N} \\ |\vec{b}| &= 0,9 \text{ N} \\ |\vec{c}| &= 0,9 \text{ N} \\ |\vec{a} - \vec{b} + \vec{c}| &= 3,4 \text{ N} \end{aligned}$$

Aufgabe 9



$$\begin{aligned} |\vec{a}| &= 2,6 \text{ N} \\ |\vec{b}| &= 0,9 \text{ N} \\ |\vec{c}| &= 2,6 \text{ N} \\ |\vec{d}| &= 3,4 \text{ N} \\ |\vec{e}| &= 1,7 \text{ N} \\ |\vec{a} + \vec{b} + \vec{c} + \vec{d} + \vec{e}| &= 6 \text{ N} \end{aligned}$$