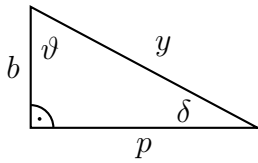


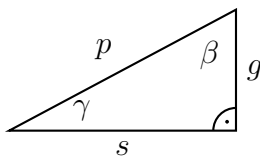
**Aufgabe 1**

Die Ankathete von  $\delta$  ist  $p$ .



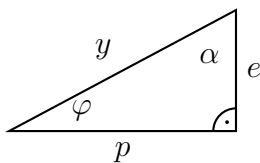
**Aufgabe 2**

Die Gegenkathete von  $\beta$  ist  $s$ .



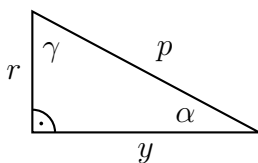
**Aufgabe 3**

Die Hypotenuse ist  $y$ . (unabhängig vom Winkel)



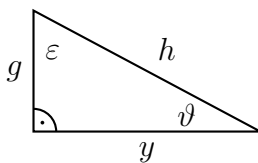
**Aufgabe 4**

$$\sin \gamma = \frac{y}{p}$$



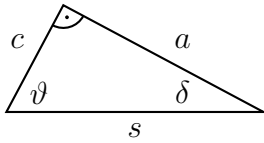
**Aufgabe 5**

$$\cos \varepsilon = \frac{g}{h}$$



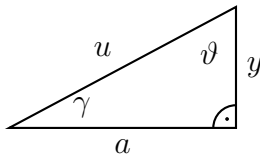
### Aufgabe 6

$$\tan \vartheta = \frac{a}{c}$$



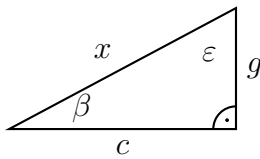
### Aufgabe 7

$$\frac{y}{u} = \cos \vartheta = \sin \gamma$$



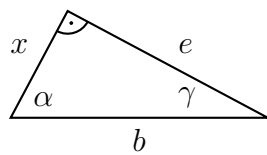
### Aufgabe 8

$$\frac{c}{g} = \tan \varepsilon$$



### Aufgabe 9

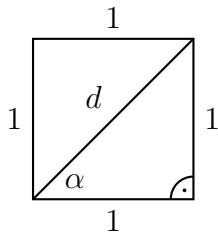
$$\frac{e}{b} = \sin \alpha = \cos \gamma$$



### Aufgabe 10

$$d = \sqrt{1^2 + 1^2} = \sqrt{2} \quad \alpha = 45^\circ$$

$$\sin 45^\circ = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}; \quad \cos 45^\circ = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}; \quad \tan 45^\circ = \frac{1}{1} = 1$$



### Aufgabe 11

$$h = \sqrt{2^2 - 1^2} = \sqrt{3}$$

$$\alpha = 60^\circ: \sin 60^\circ = \frac{\sqrt{3}}{2}; \quad \cos 60^\circ = \frac{1}{2}; \quad \tan 60^\circ = \frac{\sqrt{3}}{1} = \sqrt{3}$$

$$\beta = 30^\circ: \sin 30^\circ = \frac{1}{2}; \quad \cos 30^\circ = \frac{\sqrt{3}}{2}; \quad \tan 30^\circ = \frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3}$$

### Aufgabe 12

(a)  $\sin(72^\circ) = 0.951$

(b)  $\cos(0.25 \text{ rad}) = 0.969$

(c)  $\tan(80^\text{g}) = \tan\left(\frac{80^\text{g} \cdot 2\pi}{400^\text{g}}\right) = 3.078$

### Aufgabe 13

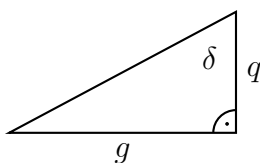
(a)  $\arccos(0.33) = 70.731^\circ$

(b)  $\arctan(2.0) = 1.107 \text{ rad}$

(c)  $\arcsin(0.37) \cdot \frac{400^\text{g}}{2\pi} = 24.128^\text{g}$  (wenn der Rechner „im Bogenmass ist“)

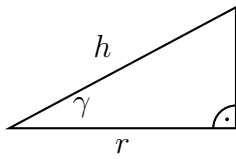
### Aufgabe 14

$$\tan \delta = \frac{g}{q} \quad \Rightarrow \quad q = \frac{g}{\tan \delta} = \frac{g}{\tan \delta^\circ} = 8.15$$



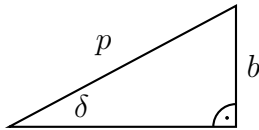
### Aufgabe 15

$$\cos \gamma = \frac{r}{h} \Rightarrow h = \frac{r}{\cos \gamma^\circ} = \frac{7.8}{\cos 17^\circ} = 8.16$$



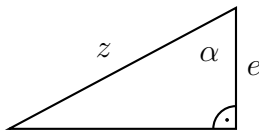
### Aufgabe 16

$$\sin \delta = \frac{b}{p} \Rightarrow p = \frac{b}{\sin \delta} = \frac{6.8}{\sin 16^\circ} = 24.67$$



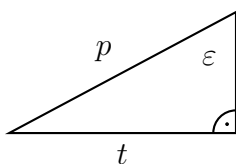
### Aufgabe 17

$$\cos \alpha = \frac{e}{z} \Rightarrow \alpha = \arccos \frac{e}{z} = \arccos \frac{8.5}{11.9} = 44.42^\circ$$



### Aufgabe 18

$$\sin \varepsilon = \frac{t}{p} \Rightarrow \varepsilon = \arcsin \frac{t}{p} = \arcsin \frac{7.9}{11.5} = 43.39^\circ$$



### Aufgabe 19

$$\tan \delta = \frac{p}{u} \Rightarrow \delta = \arctan \frac{p}{u} = \arctan \frac{9.0}{6.6} = 53.75^\circ$$

