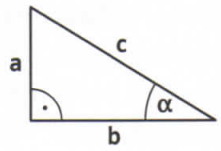
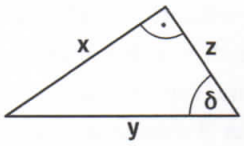
1 Drücke den Sinus, Kosinus und den Tangens durch das entsprechende Seitenverhältnis aus.

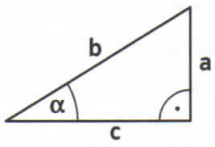
a)

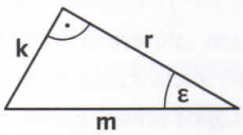




$\sin\alpha = \frac{\quad}{\quad}$ $\sin\delta = \frac{\quad}{\quad}$

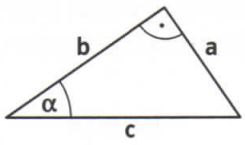
b)

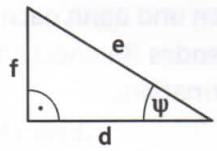




$\cos\alpha = \frac{\quad}{\quad}$ $\cos\varepsilon = \frac{\quad}{\quad}$

c)

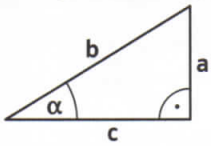


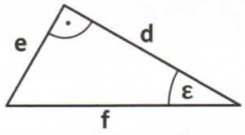


$\tan\alpha = \frac{\quad}{\quad}$ $\tan\psi = \frac{\quad}{\quad}$

2 Sind die Seitenverhältnisse von Sinus, Kosinus und Tangens richtig (r) oder falsch (f) ausgedrückt?

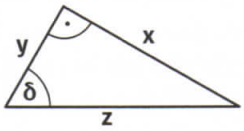
a)

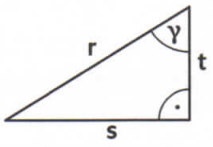




$\frac{a}{b} = \sin\alpha$ r ☐ f ☐ $\frac{d}{f} = \sin\varepsilon$ r ☐ f ☐

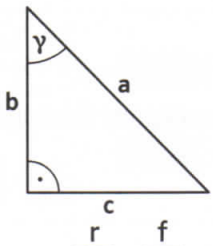
b)

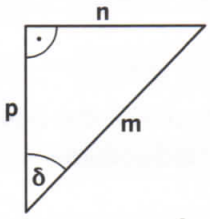




$\frac{y}{z} = \tan\delta$ r ☐ f ☐ $\frac{s}{t} = \tan\gamma$ r ☐ f ☐

c)





$\frac{c}{a} = \cos\gamma$ r ☐ f ☐ $\frac{n}{p} = \cos\delta$ r ☐ f ☐

3 Berechne die Seitenverhältnisse, runde auf drei Dezimalstellen und ermittle die zugehörigen Winkel mithilfe des Taschenrechners.

a) $\sin\alpha = \frac{4{,}5\,m}{5{,}2\,m}$

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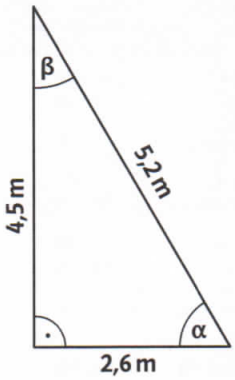
$\beta = 90° - \alpha =$ .....



b) .....

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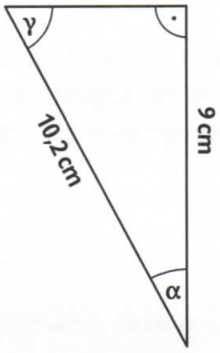

c) .....

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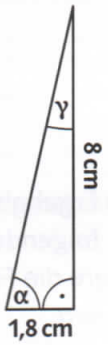

d) .....

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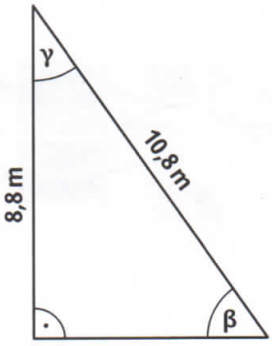

1 [▦] Berechne die unbekannten Winkel.

a) $\tan\alpha = \frac{8{,}5\,cm}{4{,}3\,cm} =$

$\alpha =$ .....

$\gamma = 180° - 90° - \alpha$

$\gamma = 90° - \alpha =$ .....

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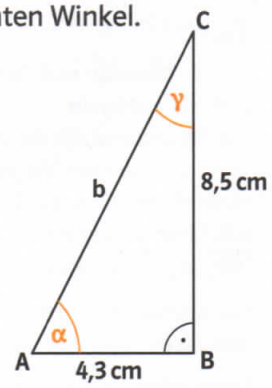

b) $\sin\alpha =$

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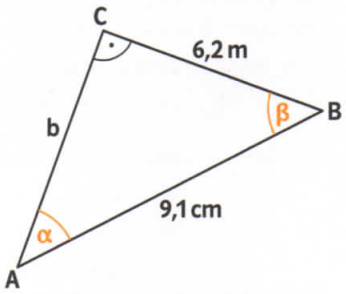

c) .....

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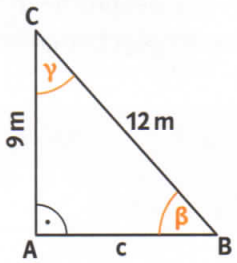

2 [▦] Berechne die unbekannten Seiten.

a) $\sin 65° = \frac{7{,}4\,m}{a}$

$a = \frac{7{,}4\,m}{\sin 65°} =$

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b) .....

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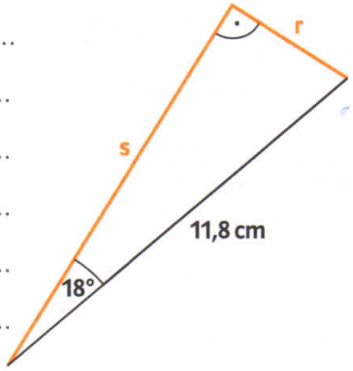

3 [▦] Berechne die unbekannten Seiten und Winkel.

a) .....

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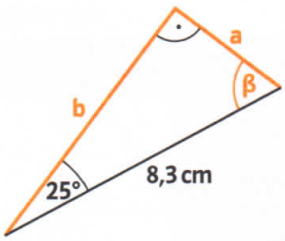

b) .....

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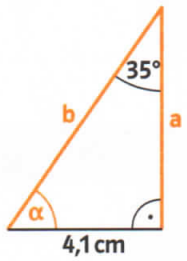

c) .....

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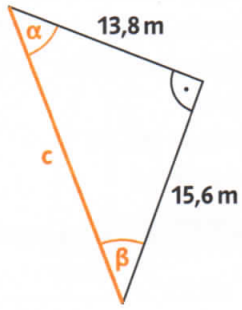

d) .....

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