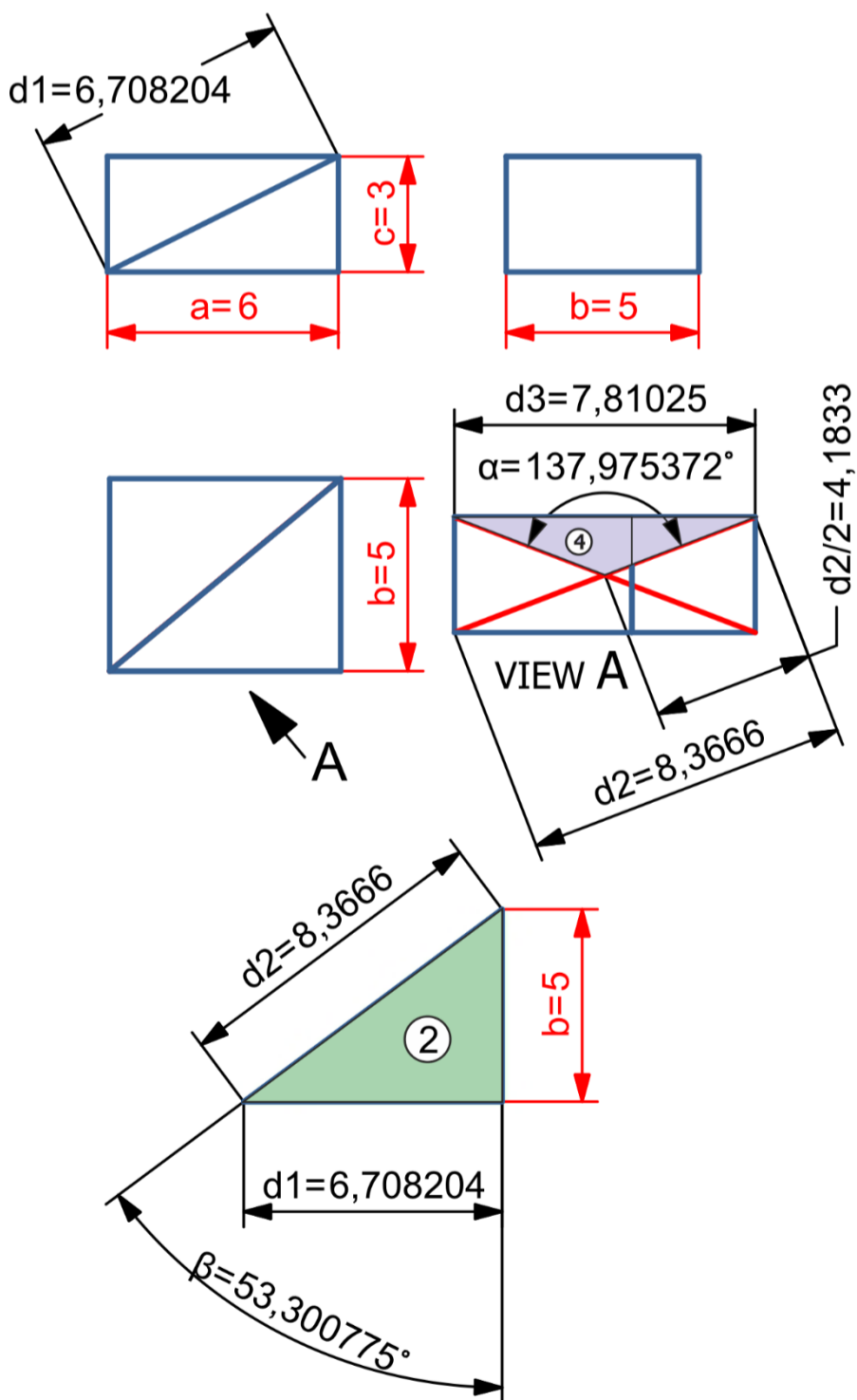
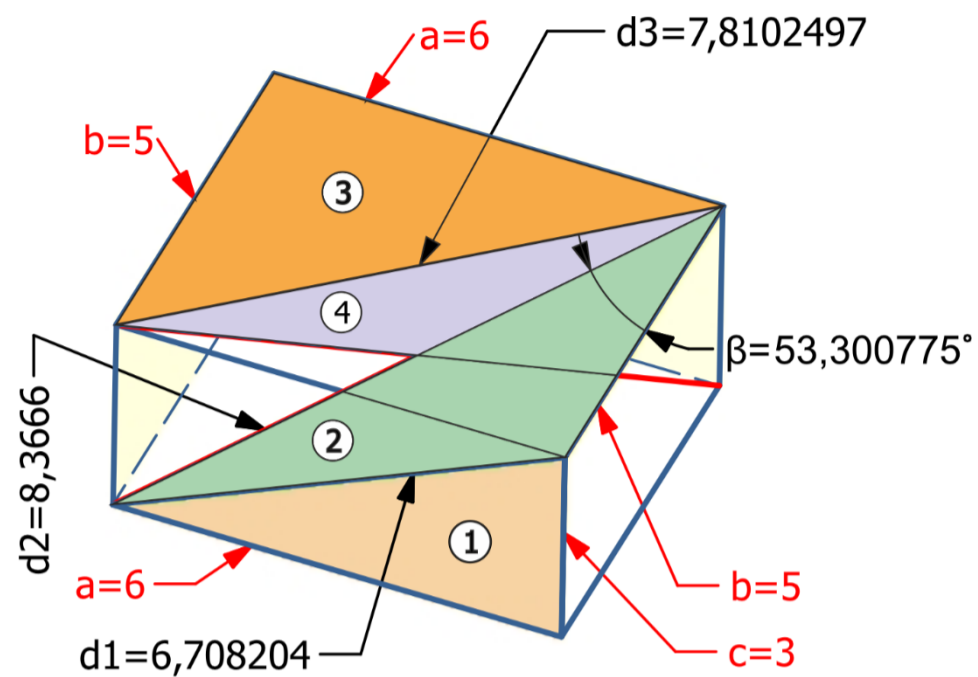


<https://www.gutefrage.net/frage/wie-kann-ich-in-dem-quader-winkel-berechnen>



Aufgabe 3

(1) braun

$$d1 = \text{Wurzel}(a^2 + c^2)$$

$$d1 = \text{Wurzel}(6^2 + 3^2)$$

$$d1 = 6,70820393 \text{ cm}$$

(2) grün

$$d2 = \text{Wurzel}(d1^2 + b^2)$$

$$d2 = \text{Wurzel}(6,70820393^2 + 5^2)$$

$$d2 = 8,36660026 \text{ cm}$$

(3) orange

$$d3 = \text{Wurzel}(a^2 + b^2)$$

$$d3 = \text{Wurzel}(6^2 + 5^2)$$

$$d3 = 7,81024968 \text{ cm}$$

(4) lila

Gegeben.:
 $d3 = 7,8102497 \text{ cm}$
 $d2 = 8,3666$
 $(d2/2) = 4,1833 \text{ cm}$

$$\alpha = \text{ARCCOS} \left(\frac{d3^2 - (d2/2)^2 - d2/2^2}{-2 * d2 * d2} \right)$$

$$\alpha = \text{ARCCOS} \left(\frac{7,81025^2 - 4,1833^2 - 4,1833^2}{-2 * 4,1833 * 4,1833} \right)$$

$$\alpha = 137,975^\circ$$

$$\beta = \text{ARCCOS} \left(\frac{b^2 - a^2 - c^2}{-2 * a * c} \right)$$

$$\beta = \text{ARCCOS} \left(\frac{5^2 - 6^2 - 3^2}{-2 * 6 * 3} \right)$$

$$\beta = 53,301^\circ$$