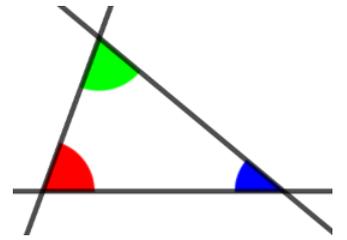


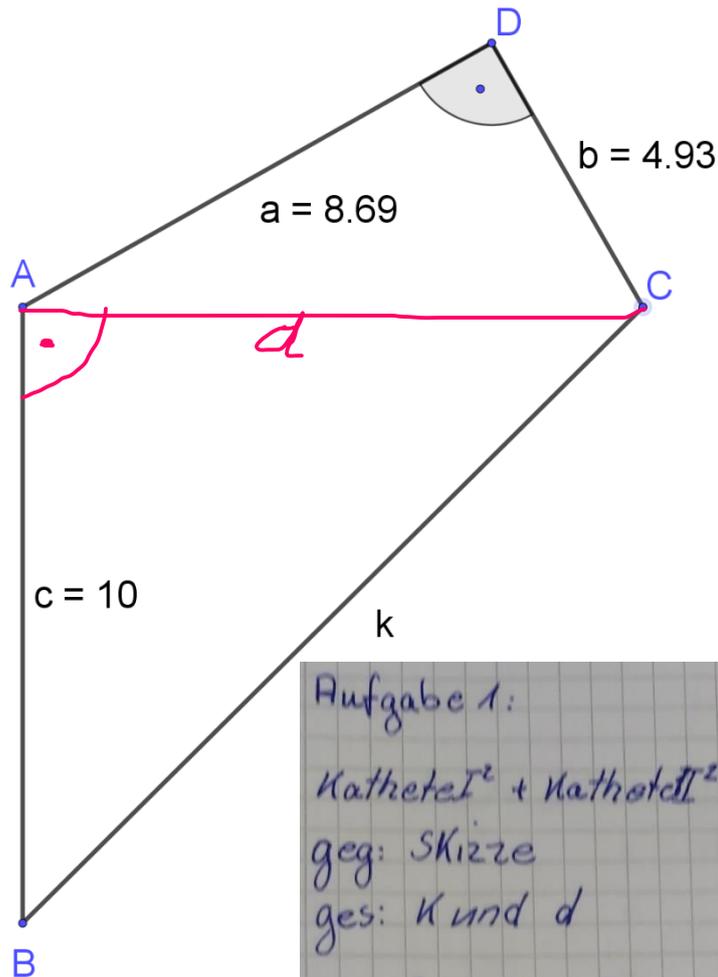
# Geometrie



## Der Satz des Pythagoras

Aufgabe 1:

Berechne die Strecke k.



Aufgabe 1:

$$\text{Kathete I}^2 + \text{Kathete II}^2 = \text{Hypotenuse}^2$$

geg: Skizze

ges: k und d

$$d^2 = a^2 + b^2$$

$$= 8,69^2 + 4,93^2$$

$$= 99,82$$

$\sqrt{\quad}$

$$d = 9,99$$

$$d^2 + c^2 = k^2$$

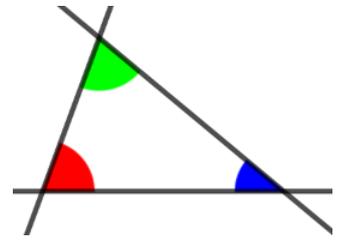
$$99,82 + 100 = k^2$$

$$199,82 = k^2$$

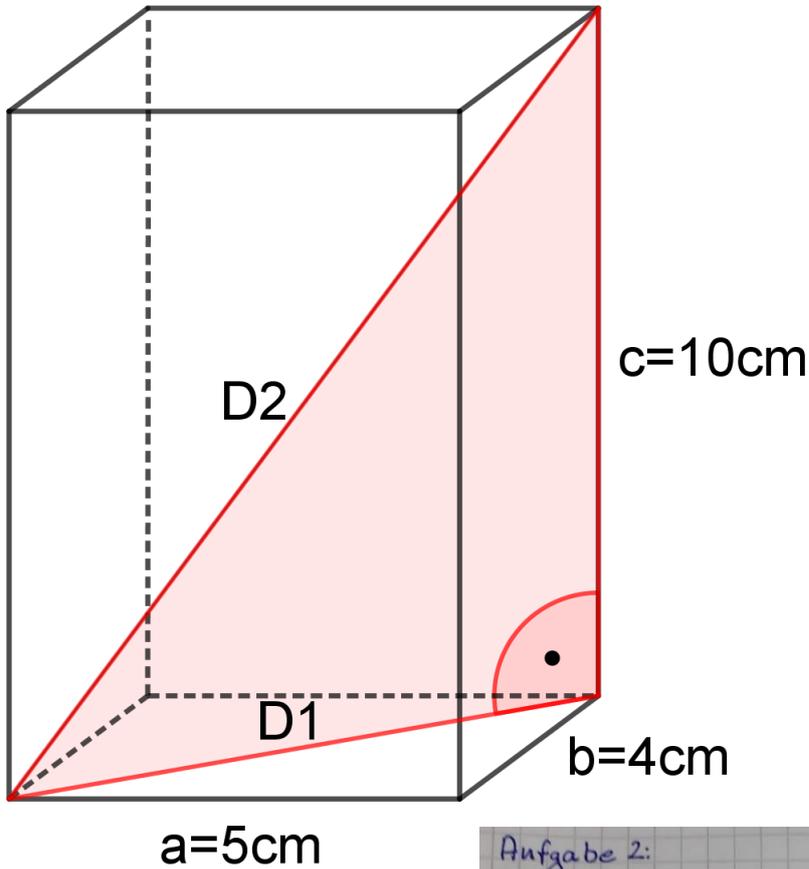
$$14,14 = k$$

Aufgabe 2:

# Geometrie



Berechne die Raumdiagonale D2.

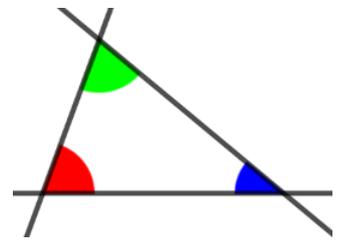


Aufgabe 2:  
geg: Skizze  
ges: D2 und D1

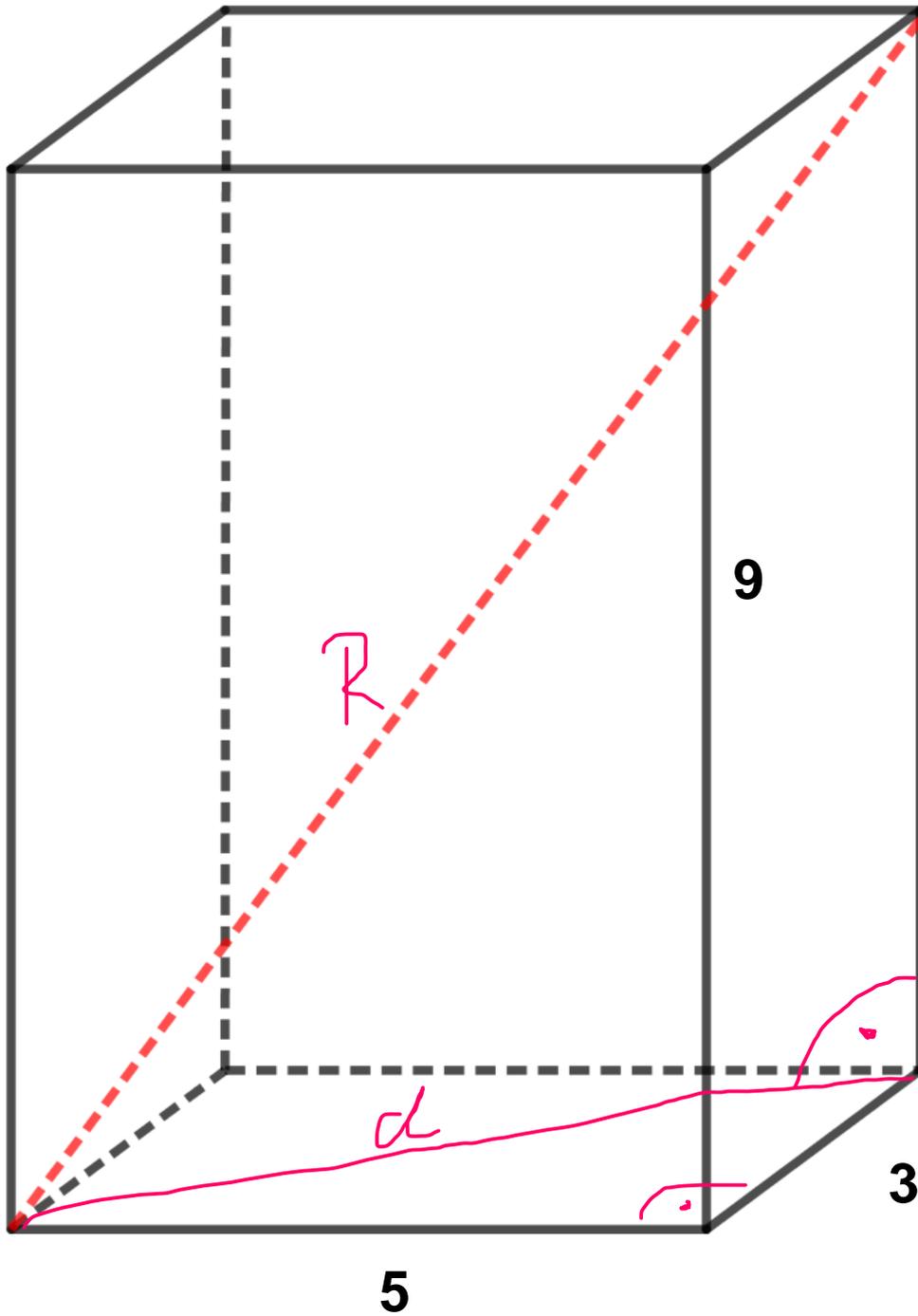
Lös:

$$\text{Kathete I}^2 + \text{Kathete II}^2 = \text{Hypotenuse}^2$$
$$a^2 + b^2 = D1^2$$
$$5^2 \text{cm}^2 + 4^2 \text{cm}^2 = D1^2$$
$$25 \text{cm}^2 + 16 \text{cm}^2 = D1^2$$
$$41 \text{cm}^2 = D1^2 \quad | \sqrt{\quad}$$
$$\sqrt{41 \text{cm}^2} = D1$$
$$6,40 \text{cm} = D1$$
$$D1^2 + c^2 = D2^2$$
$$41 \text{cm}^2 + 10^2 \text{cm}^2 = D2^2$$
$$41 \text{cm}^2 + 100 \text{cm}^2 = D2^2$$
$$141 \text{cm}^2 = D2^2 \quad | \sqrt{\quad}$$
$$11,87 \text{cm} = D2$$

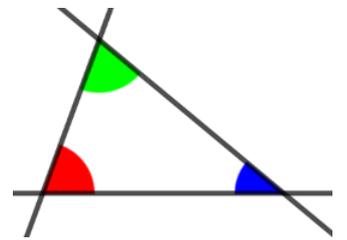
# Geometrie



Aufgabe 3: Berechne die Raumdiagonale



# Geometrie



geg: Skizze  
 ges: Raumdiagonale  $R$   
 Lös:

$$\begin{array}{rclcl}
 \text{Kathete I}^2 & + & \text{Kathete II}^2 & = & \text{Hypotenuse}^2 \\
 a^2 & + & b^2 & = & d^2 \\
 5^2 & + & 3^2 & = & d^2 \\
 25 & + & 9 & = & d^2 \\
 & & 34 & = & d^2 \quad | \sqrt{\phantom{x}} \\
 & & d & = & 5,83 \\
 d^2 & + & c^2 & = & R^2 \\
 34 & + & 9^2 & = & R^2 \\
 34 & + & 81 & = & R^2 \\
 & & 115 & = & R^2 \quad | \sqrt{\phantom{x}} \\
 & & 10,72 & = & R^2
 \end{array}$$

geg: Skizze  
 ges: Raumdiagonale  $R$   
 Lös: