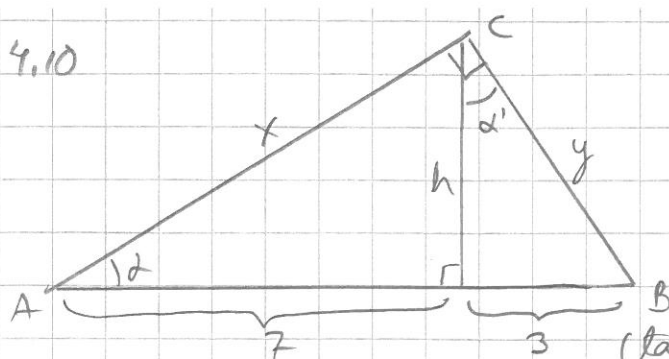


4.10



$\alpha = \alpha'$ (aufsteigendes $\perp$:
(Dreieckswinkel - " -))

$\Delta \sim \Delta \sim \Delta$ (22)

1° Kathetenstrahlensatz

2° - " - Strahlensatz

$$(\tan \alpha =) \frac{h}{7} = \frac{3}{h} \quad | \times$$

$$h^2 = 3 \cdot 7 = 21 \quad | \sqrt{\quad} \quad \Rightarrow h = \sqrt{21}$$

$$\Rightarrow \text{Fläche} = A = \frac{1}{2} \cdot 10 \cdot \sqrt{21} = \underline{5\sqrt{21}}$$

TAI:

Pythagoras:

$$\begin{cases} 7^2 + h^2 = x^2 \\ x^2 + y^2 = 10^2 \\ 3^2 + h^2 = y^2 \end{cases}$$

$$\Rightarrow x^2 + (h^2 + 3^2) = 10^2$$

$$\Rightarrow (7^2 + h^2) + (h^2 + 3^2) = 10^2$$

$$\Rightarrow 2h^2 = 10^2 + 3^2 - 7^2$$

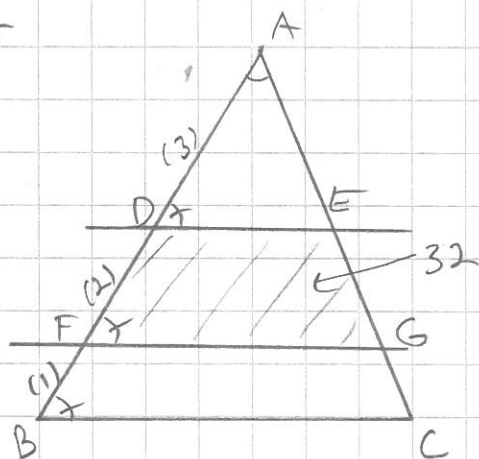
$$\Rightarrow 2h^2 = 42 \quad | :2$$

$$\Rightarrow h^2 = 21 \quad | \sqrt{\quad}$$

$$\Rightarrow h = \sqrt{21}$$

✓

4.15



$\Delta ABC \sim \Delta AFG \sim \Delta ADE$ (22)

1° gleiches Winkel A

2° $\angle B = \angle F = \angle D$

$$\frac{A(ADE)}{A(ABC)} = k^2 = \left(\frac{3}{6}\right)^2 = \left(\frac{1}{2}\right)^2 = \frac{1}{4}$$

$$\frac{A(AFG)}{A(ABC)} = k^2 = \left(\frac{5}{6}\right)^2 = \frac{25}{36}$$

$$\Rightarrow A(FGED) = \left(\frac{25}{36} - \frac{1}{4}\right) A(ABC) = 32$$