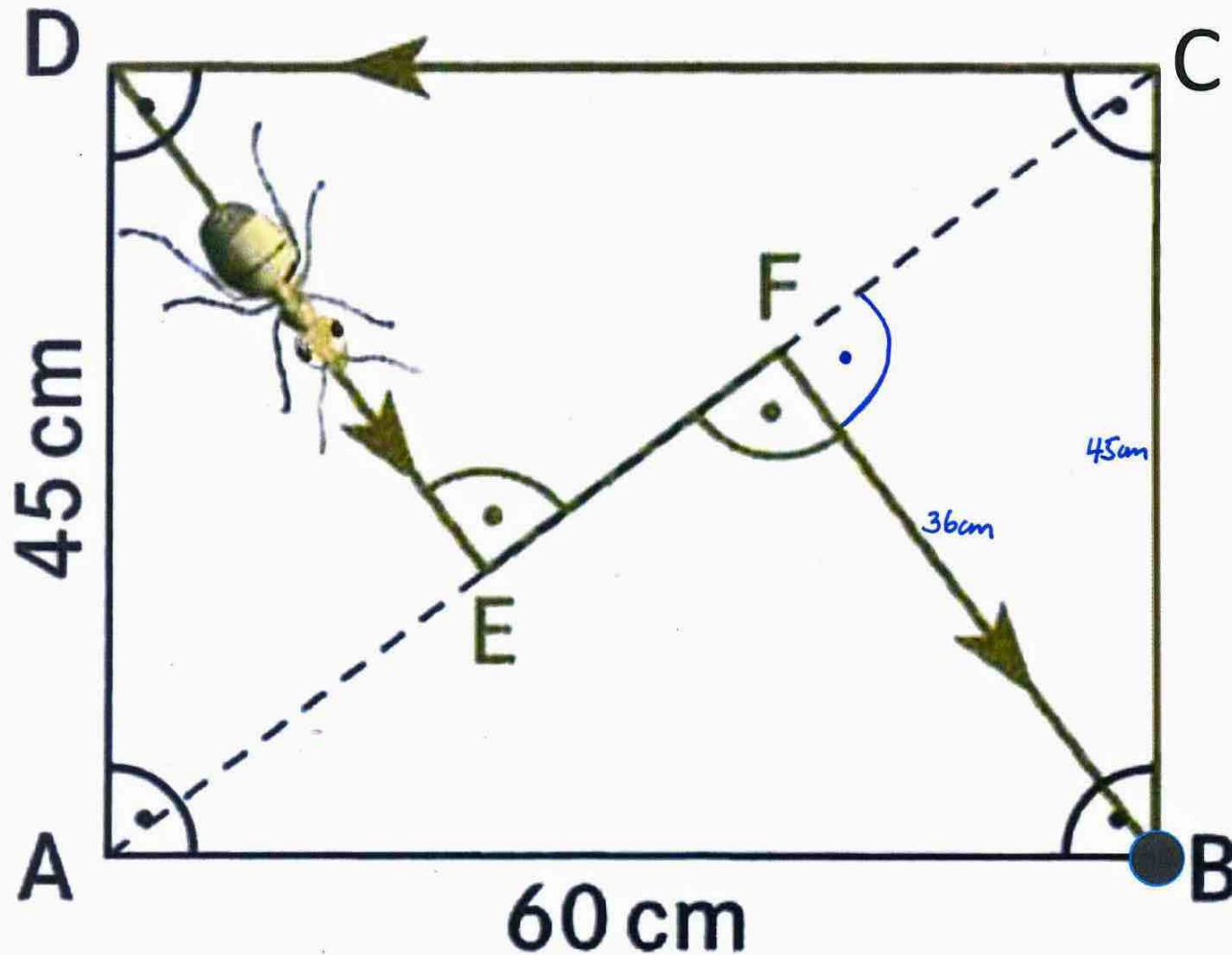


Berechne die Länge des Weges, den die Ameise von B nach B ( B – C – D – E – F – B ) zurücklegt.



$$\begin{aligned} \textcircled{1} \quad \overline{AC}^2 &= 60^2 + 45^2 \\ \overline{AC} &= \sqrt{60^2 + 45^2} \\ &= \sqrt{3'600 + 2'025} \\ &= \sqrt{5'625} = \underline{75 \text{ cm}} \end{aligned}$$

$$\textcircled{2} \quad A_{\Delta ABC} = \frac{60 \text{ cm} \cdot 45 \text{ cm}}{2} = \underline{1'350 \text{ cm}^2}$$

und:

$$A_{\Delta ABC} = \frac{\overline{AC} \cdot \overline{BF}}{2} = \frac{75 \text{ cm} \cdot \overline{BF}}{2}$$

$$\Rightarrow \frac{75 \text{ cm} \cdot \overline{BF}}{2} = 1'350 \text{ cm}^2$$

$$\curvearrowright \quad \overline{BF} = \underline{36 \text{ cm}}$$

$$\begin{aligned} \textcircled{3} \quad \overline{CF}^2 &= 45^2 - 36^2 \\ \overline{CF} &= \sqrt{45^2 - 36^2} \\ &= \sqrt{2'025 - 1'296} \\ &= \sqrt{729} = \underline{27 \text{ cm}} \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad \overline{EF} &= \overline{AC} - \overline{AE} - \overline{CF} \\ &= 75 \text{ cm} - 27 \text{ cm} - 27 \text{ cm} = \underline{21 \text{ cm}} \end{aligned}$$

$$\begin{aligned} \textcircled{5} \quad \underline{\text{Länge}} &= 45 \text{ cm} + 60 \text{ cm} + 36 \text{ cm} \\ &\quad + 21 \text{ cm} + 36 \text{ cm} = \underline{\underline{198 \text{ cm}}} \end{aligned}$$