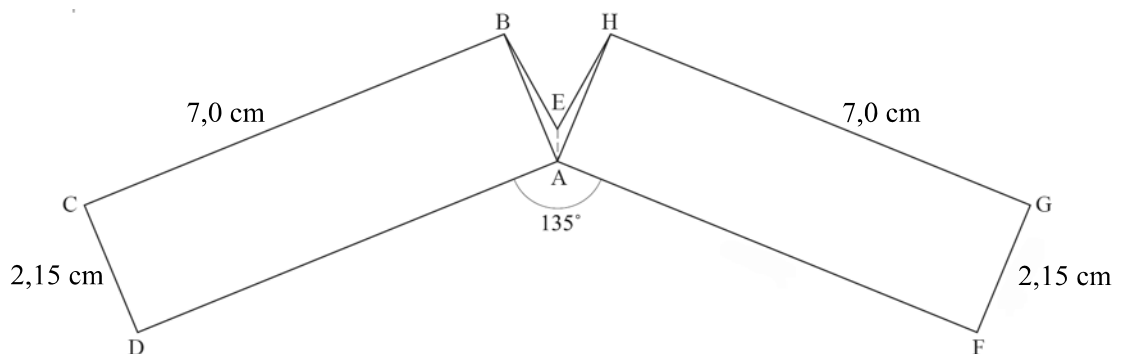


Kartonnen snoepdoosje

6. $(AS)^2 + (DS)^2 = (AD)^2$
 $2 \cdot (AS)^2 = 7^2 \quad \rightarrow \quad AS = \sqrt{\frac{1}{2} \cdot 49} = 4,95 \text{ cm}$

7. $I = (7,0 \cdot 7,0 + 4 \cdot 4,95 \cdot 7,0 + 4 \cdot \frac{1}{2} \cdot 4,95 \cdot 4,95) \cdot 4,3 = 1017 \text{ cm}^3$

8.



$$AH = 4,3 \cdot \cos 60^\circ = 2,15$$

9. $O = 4,8284 x^2$
 $h = 9,0 - 1,2071 x$
 $I = O \cdot h = 4,8284 x^2 \cdot (9,0 - 1,2071 x) = 43,46 x^2 - 5,83 x^3$

10. $\frac{dI}{dx} = 86,92 x - 17,49 x^2 = 0$
 $x \cdot (-17,49 x + 86,92) = 0$
 $x = 0 \quad \vee \quad x = \frac{86,92}{17,49} = 4,97$

Maximale volume: $I(4,97) = 358 \text{ cm}^3$