

De formule van Heron

$$\begin{array}{l|l} 17. & s = 6 \\ & s - a = 3 \\ & s - b = 2 \\ & s - c = 1 \end{array} \quad H = \sqrt{6 \cdot 3 \cdot 2 \cdot 1} = 6$$

of $H = \frac{1}{2} \cdot 3 \cdot 4 = 6$

De formule geeft dus de juiste uitkomst.

$$\begin{array}{l} 18. \quad s = \frac{1}{2} (3 + 7 + x) = 5 + \frac{1}{2}x \\ \quad s - a = \frac{1}{2}x + 2 \\ \quad s - b = \frac{1}{2}x - 2 \\ \quad s - c = 5 - \frac{1}{2}x \end{array}$$

Volgens Heron:

$$H = \sqrt{\left(5 + \frac{1}{2}x\right) \cdot \left(\frac{1}{2}x + 2\right) \cdot \left(\frac{1}{2}x - 2\right) \cdot \left(5 - \frac{1}{2}x\right)} = \sqrt{\left(25 - \frac{1}{4}x^2\right) \cdot \left(\frac{1}{4}x^2 - 4\right)}$$

$$19. \quad y_1 = \sqrt{(25 - x^2 / 4)(x^2 / 4 - 4)}$$

optie maximum levert $x = 7,6$