

# Eindexamen wiskunde B1 vwo 2006-I

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## Bedekken

$$6. \quad a(t) = \sqrt{8^2 + (8-t)^2} = \sqrt{128 - 16t + t^2}$$

$$7. \quad G(t) = \frac{t}{\sqrt{2}} \cdot \frac{16-t}{\sqrt{2}} = \frac{1}{2}t(16-t) = -\frac{1}{2}t^2 + 8t$$

$$8. \quad G(t) = -\frac{1}{2}t^2 + 8t$$

$$\frac{dG}{dt} = -t + 8 \quad G'(t) = 0 \rightarrow t = 8$$

$$\frac{da}{dt} = \frac{-16 + 2t}{2\sqrt{128 - 16t + t^2}}$$

Omdat  $a'(8) = 0$  bereiken  $a$  en  $G$  tegelijk hun uiterste waarden

$$9. \quad \text{Neem } t = 8, \quad \text{dan geldt } a = 8 \text{ en } G = 32$$

$$\text{Dus } 32 = c - \frac{1}{2} \cdot 8^2 \rightarrow c = 64$$