

Eindexamen wiskunde B1-2 havo 2002-II

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Vliegen

12. $0,09 = 0,03 \cdot 1,25 \cdot V^2 \cdot 0,0001 \cdot 200 \rightarrow V = 11 \text{ m/s}$

13. Eerst de snelheid omrekenen in m/s: $900 \text{ km/uur} = \frac{900\,000 \text{ m}}{3600 \text{ s}} = 250 \text{ m/s}$

$$\frac{W}{S} = 0,03 \cdot d \cdot V^2 = 0,03 \cdot 0,3125 \cdot 250^2 = 586$$

14. $\log(W) = \frac{1}{2} + \frac{3}{2} \cdot \log(S) \rightarrow W = 10^{\frac{1}{2} + \frac{3}{2} \cdot \log(S)}$

$$\rightarrow W = 10^{\frac{1}{2}} \cdot (10^{\log(S)})^{\frac{3}{2}} = 10^{\frac{1}{2}} \cdot S^{\frac{3}{2}} = p \cdot S^q$$

$$\rightarrow p = 3,16 \quad \text{en} \quad q = 1,50$$