

# Lösungen Mathe AP 2017 Teil B

Nr.1

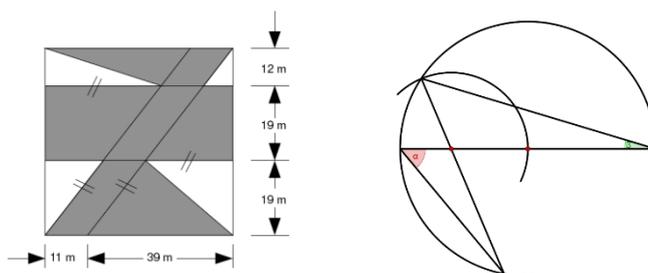
- a)  $V = \pi \cdot 32,5^2 \cdot 50 = 165915,362 \text{ cm}^3 = 0,166 \text{ m}^3$   
 b) Datum: 2.7. ;  $V = \pi \cdot 32,5^2 \cdot 31,25 = 103697,1 \text{ cm}^3 = 103,7 \text{ l}$   
 c)  $m = \frac{2}{3} \rightarrow 85 \text{ cm} = 7 \text{ K\"astchen} \rightarrow 7 \cdot \frac{2}{3} = \frac{14}{21} \rightarrow 21 \text{ K\"astchen in } x\text{-Richtung} = 126 \text{ h}$   
 $126:24 = 5 \text{ Tage \& } 6 \text{ h} \rightarrow \text{am 10.7. um 6 Uhr morgens}$

Nr. 2

- a)  $h = \sqrt{7,4^2 - \left(\frac{\sqrt{2}}{2} \cdot 6\right)^2} = 6,063 \text{ m} \rightarrow V_p = \frac{6^2 \cdot 6,063}{3} = 72,76 \text{ m}^3$   
 b)  $m = 0,6 \cdot V_p \cdot 2,6 \frac{\text{g}}{\text{m}^3} = 113,5 \text{ t}$

Nr.3

- a)  $1895,5 \text{ m}^2$   
 b)  $\alpha = 51^\circ$



Nr.4

- a)  $6000 \cdot 1,64 = 9840$   
 $32000 - 6000 - 9840 = 16160$   
 $6000 \cdot 68 + 9840 \cdot 53 + 16160 \cdot 29 = 1'398'160 \text{ Fr.}$
- b)  $32000 \cdot 0,85 = 27200 = 27200 \text{ Tickets}$   
*Tickets Kat. A + B = 26000 Tickets*  
 $27200 - 26000 = 1200 \text{ Tickets Kat. A}$   
 $1200 \cdot (1 - 0,105) = 1074$   
 $1074 \cdot 68 = 73'032 \text{ Fr.}$

Nr.5

- a)  $42 - 6 = 36 \text{ min}$   
 $\frac{35 \text{ km}}{42 \text{ min}} = 50 \frac{\text{km}}{\text{h}} ; \frac{35 \text{ km}}{36 \text{ min}} = 58,3 \frac{\text{km}}{\text{h}} \rightarrow 8,3 \frac{\text{km}}{\text{h}} \text{ schneller}$
- b)  $\frac{s}{5,5 \text{ min}} = \frac{s}{8,5 \text{ min}} + 6 \frac{\text{m}}{\text{s}} \rightarrow s = 5610 \text{ m}$