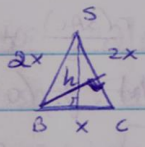
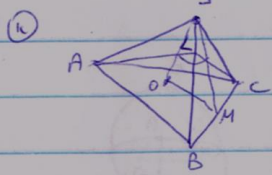
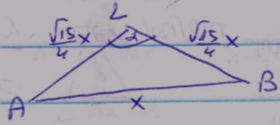


4.11
5



$\sqrt{4x^2 - \frac{x^2}{4}} = \frac{\sqrt{15}}{4}x$: mit BC - d S N bilden

$S_{ABC} = \frac{x \cdot \frac{\sqrt{15}}{4}x}{2} = \frac{2x \cdot h}{2} \rightarrow h = \frac{\sqrt{15}}{4}x = \frac{\sqrt{15}}{4}x$



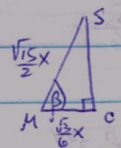
$x^2 = \frac{15x^2}{8} - 2 \cdot \frac{15x^2}{8} \cos \alpha$

$\cos \alpha = \frac{7}{15} \rightarrow \sin \alpha = \frac{4\sqrt{11}}{15}$

mit Hilfe von SA per Höhen in $\triangle SBC$

⑦ $OM = \frac{1}{3} \cdot \frac{\sqrt{3}}{2} \cdot x = \frac{\sqrt{3}}{6}x$

$SM = \sqrt{SC^2 - MC^2} = \sqrt{4x^2 - \frac{x^2}{4}} = \frac{\sqrt{15}}{2}x$



$SO = \sqrt{\frac{15x^2}{4} - \frac{3x^2}{36}} = \sqrt{\frac{11}{3}}x$

$\tan \beta = \frac{SO}{MO} = \frac{\sqrt{\frac{11}{3}}x}{\frac{\sqrt{3}}{6}x} = 2\sqrt{11} = \sqrt{44}$