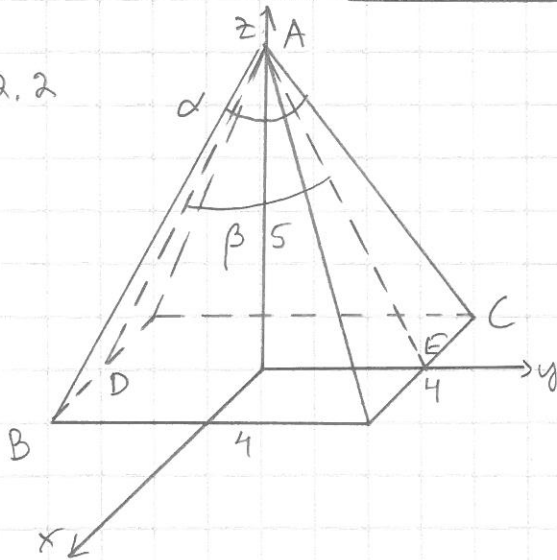


$$\begin{aligned} \vec{PC} \parallel \vec{n} & \Rightarrow \vec{PC} = t\vec{n} = 2t\vec{i} + t\vec{j} - 5t\vec{k} \\ & \Rightarrow C = (0+2t, 1+t, 0-5t) \\ C \text{ on Pannello 2} & : 2 \cdot 2t + (1+t) - 5(-5t) + 7 = 0 \Rightarrow t = -\frac{12}{5} \\ & \Rightarrow \vec{PC} = -\frac{24}{5}\vec{i} - \frac{12}{5}\vec{j} + 12\vec{k} \\ & \Rightarrow |\vec{PC}| = \sqrt{\dots} = \underline{\underline{\frac{12\sqrt{30}}{5}}} \end{aligned}$$

12. Measures Recap

12.2



$$\begin{aligned} A &= (0, 0, 5) & B &= (2, -2, 0) \\ C &= (-2, 2, 0) \end{aligned}$$

$$\begin{aligned} a) \quad \vec{AB} &= 2\vec{i} - 2\vec{j} - 5\vec{k} \\ \vec{AC} &= -2\vec{i} + 2\vec{j} - 5\vec{k} \end{aligned}$$

$$\begin{aligned} \cos(\angle \vec{AB}, \vec{AC}) &= \frac{\vec{AB} \cdot \vec{AC}}{|\vec{AB}| |\vec{AC}|} = \frac{2 \cdot (-2) - 2 \cdot 2 + (-5) \cdot (-5)}{(\sqrt{2^2 + (-2)^2 + (-5)^2})^2} \\ &= \frac{12}{33} \end{aligned}$$

$$\Rightarrow \angle(\vec{AB}, \vec{AC}) = \alpha \approx 58,992^\circ \approx \underline{\underline{59^\circ}}$$

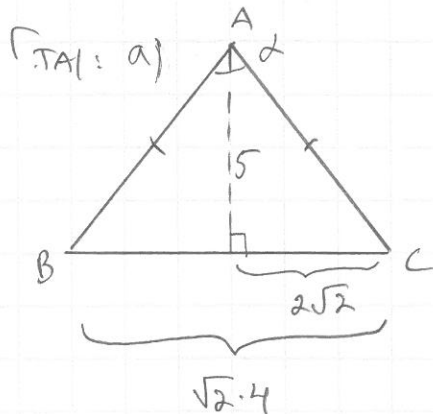
$$b) \quad D = (0, -2, 0), \quad E = (0, 2, 0)$$

$$\vec{AD} = -2\vec{j} - 5\vec{k}$$

$$\vec{AE} = 2\vec{j} - 5\vec{k}$$

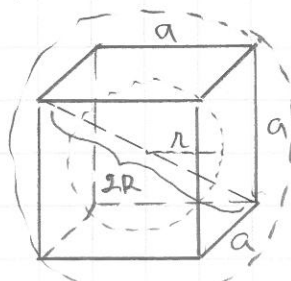
$$\cos(\angle \vec{AD}, \vec{AE}) = \frac{\vec{AD} \cdot \vec{AE}}{|\vec{AD}| |\vec{AE}|} = \frac{0 \cdot 0 - 2 \cdot 2 + (-5) \cdot (-5)}{(\sqrt{(-2)^2 + (-5)^2})^2} = \frac{21}{29}$$

$$\Rightarrow \angle(\vec{AD}, \vec{AE}) = \beta \approx 43,603^\circ \approx \underline{\underline{44^\circ}}$$



$$\tan \frac{\alpha}{2} = \frac{2\sqrt{2}}{5} \Rightarrow \frac{\alpha}{2} \Rightarrow \alpha \approx 59^\circ$$

12.4



$$\text{pieno pello: } r = \frac{a}{2}$$

$$\begin{aligned} \text{iso pello: } 2R &= \sqrt{a^2 + a^2 + a^2} = \sqrt{3a^2} \\ &= \sqrt{3} \cdot \sqrt{a^2} = \sqrt{3} \cdot |a| = \sqrt{3}a \quad | :2 \\ &\Rightarrow R = \frac{\sqrt{3}}{2}a \end{aligned}$$