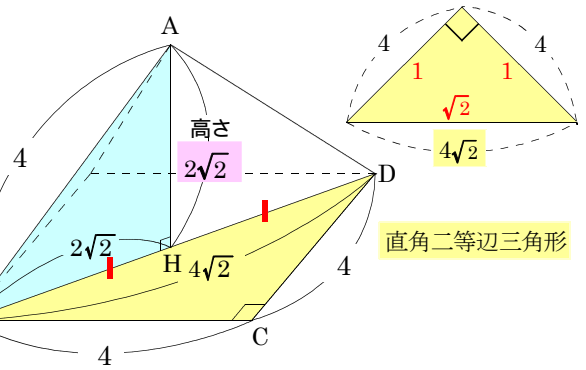


(ア) この四角錐の体積を求めなさい。

1辺が4cmの正方形
底面積 $4 \times 4 = 16$

$$\begin{aligned} AH &= \sqrt{4^2 - (2\sqrt{2})^2} \\ &= \sqrt{16 - 8} \\ &= \sqrt{8} \\ &= 2\sqrt{2} \end{aligned}$$

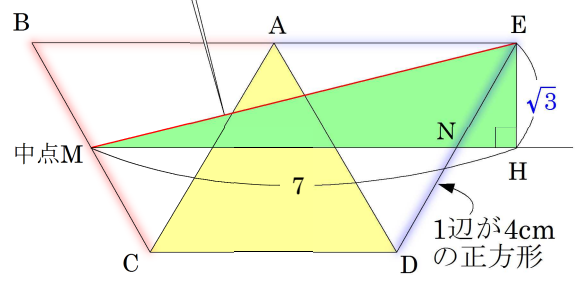
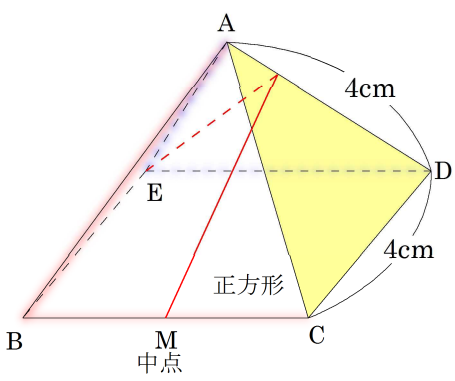


角錐の体積 = $\frac{1}{3} \times$ 底面積 \times 高さ

$$\frac{1}{3} \times \frac{\text{底面積}}{\text{一辺}} \times \frac{\text{高さ}}{\text{一辺}} = \frac{32\sqrt{2}}{3} \text{ cm}^3$$

(イ) 最も短いMEの長さを求めよ。

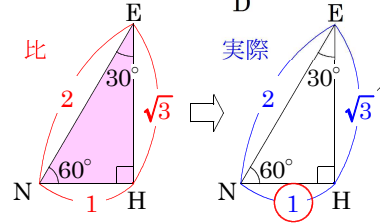
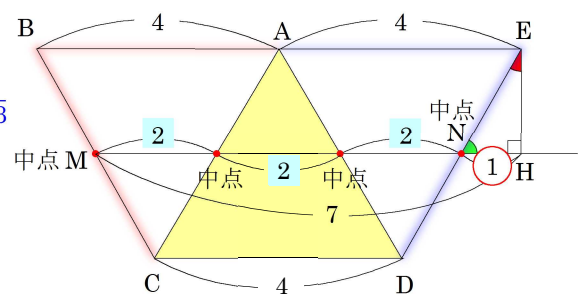
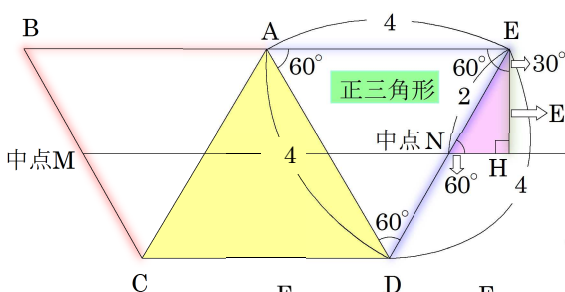
MEを直線で結んだとき長さが最も短い



$$\begin{aligned} \textcircled{3} \quad ME &= \sqrt{7^2 + (\sqrt{3})^2} \\ &= \sqrt{49 + 3} \\ &= \sqrt{52} = 2\sqrt{13} \quad \text{答 } 2\sqrt{13} \text{ cm} \end{aligned}$$

① EHの長さを求める!

② MHの長さを求める!



中点連結定理を利用して求める!