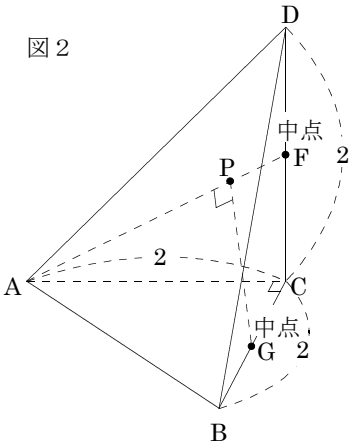


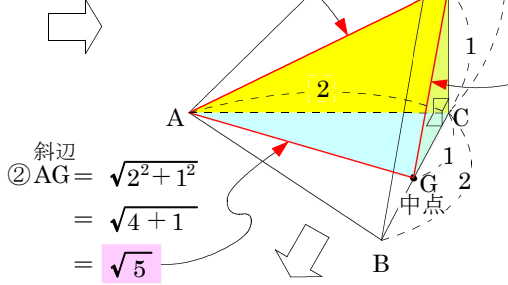
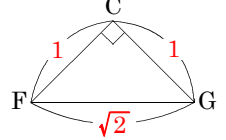
6 (ウ)図2のとき線分PGの長さを求めよ。



(1)  $\triangle AGF$ の面積を求めろ！

$$\begin{aligned} \text{斜辺} \\ \textcircled{1} AF &= \sqrt{2^2+1^2} \\ &= \sqrt{4+1} \\ &= \sqrt{5} \end{aligned}$$

直角二等辺三角形の比



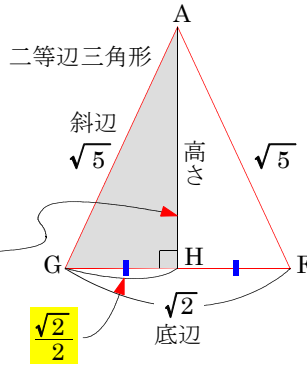
③  $\triangle CFG$ は直角二等辺三角形より  $FG = \sqrt{2}$

$$\begin{aligned} \text{斜辺} \\ \textcircled{2} AG &= \sqrt{2^2+1^2} \\ &= \sqrt{4+1} \\ &= \sqrt{5} \end{aligned}$$

$$\textcircled{4} AH = \sqrt{(\sqrt{5})^2 - \left(\frac{\sqrt{2}}{2}\right)^2}$$

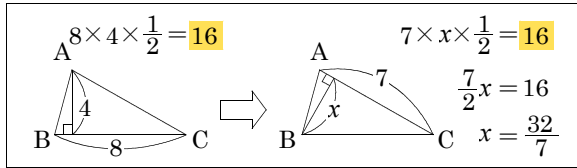
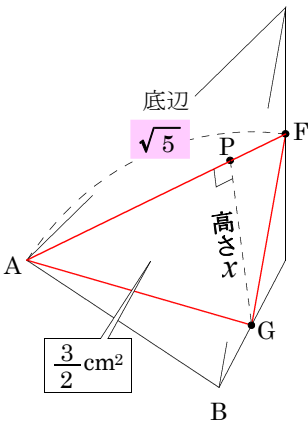
$$AH = \sqrt{5 - \frac{2}{4}}$$

$$HF = \sqrt{\frac{18}{4}} = \frac{3\sqrt{2}}{2}$$



$\triangle AGF$ の面積

$$\textcircled{5} \sqrt{2} \times \frac{3\sqrt{2}}{2} \times \frac{1}{2} = \frac{3}{2}$$



$\triangle AGF$ の面積を利用してGPの長さを求める

$$\textcircled{6} \sqrt{5} \times x \times \frac{1}{2} = \frac{3}{2}$$

$$\frac{2}{\sqrt{5}} \times \frac{\sqrt{5}}{2} x = \frac{3}{2} \times \frac{2}{\sqrt{5}}$$

$$x = \frac{3}{\sqrt{5}}$$

$$x = \frac{3\sqrt{5}}{5}$$

答  $\frac{3\sqrt{5}}{5}$  cm