

Planimetria - mieszanka zadań ciekawych ZI-TK

zadanie 205

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3D

1 zadanie 205

$$|EF| = |GH| = 2r$$

$$\sin 60^\circ = \frac{h}{\frac{5}{2}} = \frac{h}{5} \quad h = \frac{5\sqrt{3}}{2}$$

$$h = 2r = |EF| = |GH| = \frac{5\sqrt{3}}{2}$$

$$|FC| = |CG|$$

$$|CFO| = |CGO| = 90^\circ \wedge |OCF| = |OCG| = 30^\circ$$

$$|GOC| = |FOC| = 60^\circ$$

$$|FOG| = 60^\circ \cdot 2 = 120^\circ$$

$$P_{EGFH} = \frac{1}{2} \cdot |FE| \cdot |GH| \cdot \sin 120^\circ = \frac{1}{2} \cdot \left(\frac{5\sqrt{3}}{2}\right)^2 \cdot \frac{\sqrt{3}}{2} = \frac{75\sqrt{3}}{8}$$

