



$$S_1 = 6 \rightarrow FE = \sqrt{\frac{6}{\pi}}$$

$$\widehat{EAF} = 30^\circ \rightarrow AF = 2FE \rightarrow AF = 2\sqrt{\frac{6}{\pi}}$$

$$AFE \sim AGD \rightarrow \frac{AF}{AG} = \frac{FE}{GD} \rightarrow \frac{2\sqrt{\frac{6}{\pi}}}{\sqrt{\frac{6}{\pi}} + GD} = \frac{\sqrt{\frac{6}{\pi}}}{GD} \rightarrow GD = 3\sqrt{\frac{6}{\pi}} \rightarrow S_2 = 27$$

