

3.34
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$AD = \frac{\sqrt{3}m \sin \alpha}{2} \leftarrow \frac{AE}{AD} = \sin \alpha$
 $DO = \frac{1}{3} AD = \frac{1}{3} \cdot \frac{\sqrt{3}m}{2} = \frac{\sqrt{3}m}{6}$
 $\frac{OD}{KD} = \cos \alpha \rightarrow KD = \frac{\sqrt{3}m}{6 \cos \alpha}$

$BF = GC \Leftrightarrow KF = KG \leftarrow \frac{KF}{KB} = \frac{FG}{BC} = \frac{KG}{KC} \quad \triangle ABC \approx \text{ortok } \checkmark \text{ (d)}$
 $\sphericalangle ABF = \sphericalangle ACG \quad ! \quad AB = AC \text{ Polij}$
 (3.1.3) $\triangle ABF \cong \triangle ACG$ p f
 . n p l p a y p f l r i g n t a r k n a l i s n k i s i n i n i l i a A E \Leftrightarrow

$KF = KD - DE = \frac{\sqrt{3}m}{6 \cos \alpha} - \frac{\sqrt{3}m \cos \alpha}{2}, \quad \frac{KF}{KB} = \frac{FG}{BC} \rightarrow FG = \frac{KF \cdot BC}{KB} = \text{ (3)}$

$$\frac{\left(\frac{\sqrt{3}m}{6 \cos \alpha} - \frac{\sqrt{3}m \cos \alpha}{2} \right) m}{\frac{\sqrt{3}m}{6 \cos \alpha}} = \frac{\sqrt{3}m^2 (1 - 3 \cos^2 \alpha)}{6 \cos \alpha} = m(1 - 3 \cos^2 \alpha)$$

$$S_{AFG} = \frac{AE \cdot FG}{2} = \frac{\sqrt{3}m \sin \alpha}{2 \cdot 2} \cdot m(1 - 3 \cos^2 \alpha) = \frac{\sqrt{3}m^2 \sin \alpha (1 - 3 \cos^2 \alpha)}{4}$$