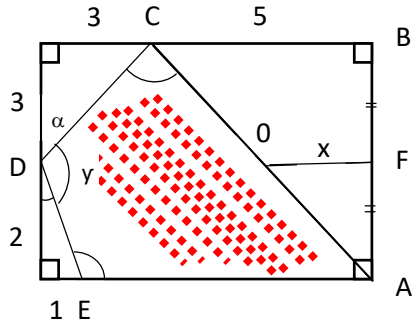


Geometry and trigo



Given Rectangular

$$\sphericalangle F = 90^\circ$$

$$BF = FA$$

(a)  $S = 8.5 = 40$

$$S_{ACDE} = 40 - \left( \frac{5.5}{2} + \frac{3.3}{2} + 1 \right) = 40 - 18 = 22$$

(b)  $t_g \alpha = 1$

$$t_g \beta = \frac{1}{2}$$

Prove  $t_g \gamma = -3$

$$t_g(\alpha + \beta) = \frac{1 + \frac{1}{2}}{1 - \frac{1}{2}} = 3$$

$$(\alpha + \beta) = 180 - \gamma$$

$$3 = t_g(\alpha + \beta) = t_g(180 - \gamma) = -t_g \gamma$$

$$t_g \gamma = -3$$

(c) Prove  $\sphericalangle BOA = 90^\circ$   
 $\sphericalangle ACD = 90^\circ$

(d) Prove  $t_g(\sphericalangle E) = -2$

(e) Prove  $t_g(\gamma + \sphericalangle E) = 1$