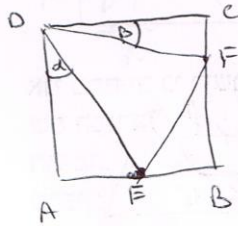


2.78
K6



$$DE = \frac{x}{\cos \alpha}$$

$$DF = \frac{x}{\cos \beta}$$

AD=x (10)

$$S_{DFE} = \frac{x^2 \sin(90^\circ - \alpha - \beta)}{2 \cos \alpha \cos \beta}$$

$$S_{DFE} = x^2 - \frac{x^2 \cos(\alpha + \beta)}{2 \cos \alpha \cos \beta} = \frac{x^2 (2 \cos \alpha \cos \beta - \cos(\alpha + \beta))}{2 \cos \alpha \cos \beta}$$

$$= \frac{x^2 (2 \cos \alpha \cos \beta - \cos \alpha \cos \beta - \sin \alpha \sin \beta)}{2 \cos \alpha \cos \beta} = \frac{x^2 (\cos \alpha \cos \beta - \sin \alpha \sin \beta)}{2 \cos \alpha \cos \beta} = \frac{x^2 \cos(\alpha + \beta)}{2 \cos \alpha \cos \beta}$$

$$\frac{S_{DFE}}{S_{ABCD} - S_{DFE}} = \frac{\frac{x^2 \cos(\alpha + \beta)}{2 \cos \alpha \cos \beta}}{\frac{x^2 \cos(\alpha + \beta)}{2 \cos \alpha \cos \beta}} = \frac{\cos(\alpha + \beta)}{\cos(\alpha + \beta)}$$