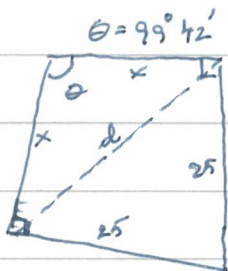


Assumption:  $GF = DE = 25$  feet

Two rectangles, each  $25 \cdot 160 \Rightarrow 8000 \text{ ft}^2$

One sector of a circle  $\Rightarrow \frac{99^\circ 42'}{360^\circ} \pi 160^2 \text{ ft}^2 = 22273,2 \text{ ft}^2$   
30273,2 ft<sup>2</sup>

And one small area top left:



$$\text{area} = \frac{1}{2} x^2 \sin \theta + \frac{1}{2} 25^2 \sin(180^\circ - \theta) = \frac{1}{2} \sin \theta (x^2 + 625)$$

$$d^2 = x^2 + x^2 - 2x \cdot x \cos \theta = 2x^2 (1 - \cos \theta)$$

$$d^2 = 25^2 + 25^2 - 2 \cdot 25 \cdot 25 \cos(180^\circ - \theta) = 2 \cdot 625 (1 + \cos \theta)$$

$$\Rightarrow x^2 = 625 \frac{1 + \cos \theta}{1 - \cos \theta} ; x^2 + 625 = 625 \left( \frac{1 + \cos \theta}{1 - \cos \theta} + 1 \right) = \frac{2 \cdot 625}{1 - \cos \theta}$$

$$\Rightarrow \text{area} = 625 \frac{\sin \theta}{1 - \cos \theta} \text{ ft}^2 = 527,2 \text{ ft}^2$$

$$\text{Total area} = 527,2 \text{ ft}^2 + 30273,2 \text{ ft}^2 = \underline{\underline{30800,4 \text{ ft}^2}}$$