



Solution to Problem 77

$$AF = GD = R - 8, \quad FP = PG = R$$

$$[(R - 8) + (R - 8)]^2 + 82^2 = (2R)^2$$

$$(2R - 16)^2 + 82^2 = 4R^2$$

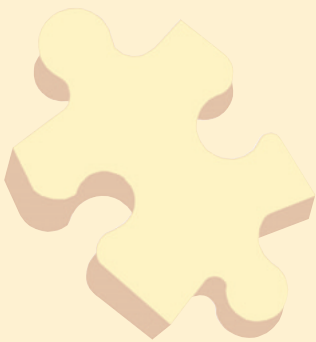
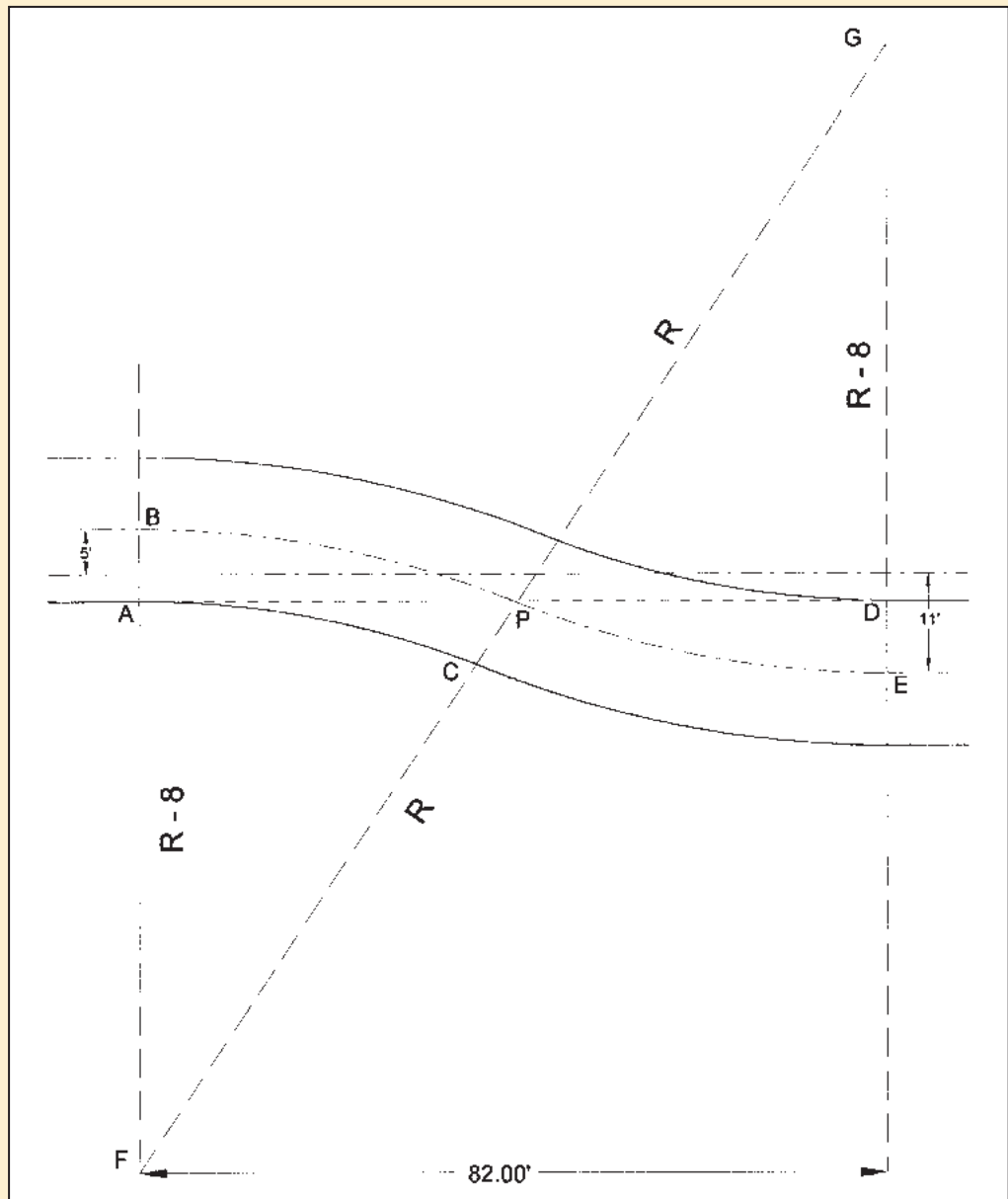
$$16^2 + 82^2 = 64R$$

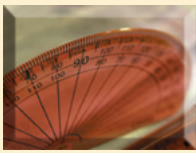
$$R = 109.0625$$

$$\text{Angle BFP} = \text{Angle PGE} = \phi$$

$$\sin \phi = \frac{41.00}{109.0625} = 0.375931232$$

$$\phi = 22^\circ 04' 55''$$





Solution to Problem 78

