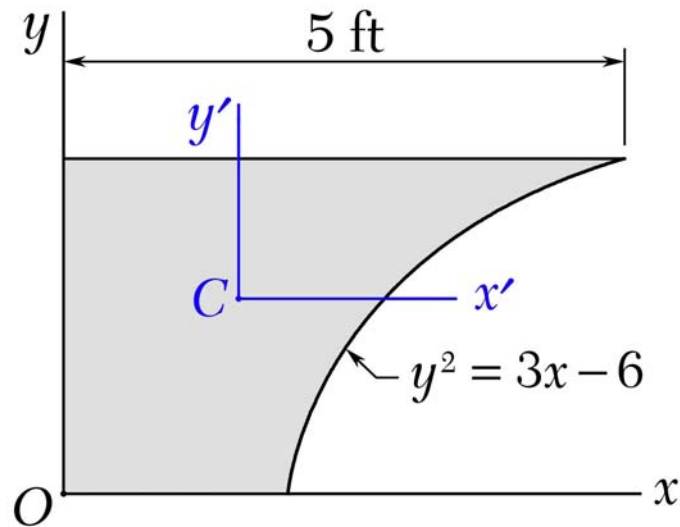**Quiz #7.** Determine the moment of inertia $\overline{I}_{y'}$ and the radius of gyration $\overline{k}_{y'}$ of the shaded area about the y' axis, which passes through its centroid $C(\overline{x}, \overline{y})$ as shown. (*Hint.* Determine $\overline{x}$ and I_y first.)

Answers:

$\overline{I}_{y'} = 10.65 \text{ ft}^4, \ \overline{k}_{y'} = 1.088 \text{ ft}$ ④

$\left(\begin{array}{l} A = 9 \text{ ft}^2, \ \overline{x} = \frac{49}{30} \text{ ft} = 1.633 \text{ ft}, \\ I_y = \frac{1213}{35} \text{ ft}^4 = 34.657 \text{ ft}^4 \end{array} \right)$ ⑥