10. Suppose the cost of labor is $12 per hour and the cost of capital is $6 per hour for a firm with the following production function:

$$q = 100\, K^{.25} L^{.75}$$

Determine the cost-minimizing capital–labor ratio at this firm.

11. Araceli's Earrings is an earring design and manufacturing company. The production function for earrings is $q = 25\,KL$, where q = pairs of earrings per week, K = hours of equipment used, and L = hours of labor. Workers are paid $8 per hour, and the equipment rents for $4 per hour.

a. Determine the cost-minimizing capital–labor ratio at this firm.

b. How much L and K will the firm use to produce 20,000 pairs of earrings, and at what cost?