

Do not put your name anywhere on the assignment, other than on the back of this sheet of paper. Staple your answers on the front of this sheet of paper. Failure to follow these directions will cost you one point. Your assignment will be typed, except graphs can be drawn by hand and mathematical equations can be done by hand. Failure to type it will cost you ten points. If you do double-sided printing or print on the back of scrap paper, I will give you one additional point.

1) (40 points) Draw an isoquant which shows the output of 100 items. Put a scale on both axes. Draw two isocost lines. The first represents a wage of \$30/L and the rental rate is \$60/K. How much capital and labor will you use? Explain how you reached that conclusion. For the second isocost line, assume the wage rate is \$30/L and the rental rate is \$30/K. How much capital and labor will you use? Explain how you reached that conclusion. For both lines, you want to produce 100 items and remember to you have a precise scale on the axes. Explain how you determined where to draw the two lines.

2) (30 points) Draw an isoquant/isocost diagram which has the wage rate twice the rental rate of capital. Find four points on the expansion path. Explain how you know the wage rate is twice the rental rate of capital. Explain how you found the four points on the expansion path.

3) (15 points) What is the slope of the isoquant? How do you know that?

4) (15 points) Without drawing the isoquant/isocost diagram, explain how we can use the expansion path to determine the total cost function for the product. (If you want to draw the diagram, I will not take off for it unless you draw it wrong.)