1. A firm produce quantity Q of breakfast cereal using labor L and material M with the production function Q=50.+M+L, The marginal product function are:

MPL=25+1

MPM=+ +1

What type of return to scale for this function?

1. The marginal product of labor in the production of computer chips is 50 chips per hour. The marginal rate of technical substitution of hours of labor for hours of machine-capital is 1/4. What is the marginal product of capital?
2. Do the following functions exhibit increasing, constant, or decreasing returns to scale? What happens to the marginal product of each individual factor as that factor is increased, and the other factor is held constant?
3. q = 3L + 2K
4. q = (2L + 2K)1/2
5. q = 3LK2

1. q=L1/2K1/2

4. The production function of a firm is q=50+20L. If w=15, the marginal cost of producting the 10th unit of product is