Problem Set 3

1. True or false? Explain your reasoning.

a. The short-run average total cost can never be less than the long-run average total cost.

b. The short-run average variable cost can never be less than the long-run average total cost.

c. In the long run, choosing a higher level of fixed cost shifts the long-run average total cost curve upward.

2. Labour costs represent a large percentage of total costs for many firms. According to Trading Economics, Canada's labour costs were up 0.51% in 2016, compared to 2015.

a. When labour costs increase, what happens to average total cost and marginal cost? Consider a case in which labour costs are only variable costs and a case in which they are both variable and fixed costs.

An increase in labour productivity means each worker can produce more output. Recent data on productivity show that labour productivity in the Canadian business sector grew annually by 1.5% between 1991 and 1999, by 1.0% between 2000 and 2009, and by 0.89% between 2016 and 2017.