

17. A builder of custom motorcycles has a choice of operating out of one garage or two. When it operates out of one garage, its average total cost of production is given by $ATC_1 = Q^2 - 6Q + 14$. If it operates out of two garages, its average total cost of production is given by $ATC_2 = Q^2 - 10Q + 30$.
- What does this firm's $LATC$ look like? Can you describe it as a function?
 - Derive marginal cost for the case of one garage using calculus.
 - Use calculus to determine for which values marginal cost is increasing for one garage. Decreasing?
 - Minimize average total cost when the builder operates out of only one garage using calculus.
 - Derive marginal cost for the case of two garages using calculus.
 - Use calculus to determine for which values marginal cost is increasing for two garages. Decreasing?
 - Minimize average total cost when the builder operates out of two garages using calculus.