**Quiz questions**

1. Suppose that the marginal cost of production is

$$MC=Q^{2}-Q.$$

1. Plot the $MC$ curve.
2. Indicate the curve’s decreasing and increasing sections with resect to $Q$.
3. Based on your answer in part (b), which section suggests learning by doing?
4. In the class, we discussed Argote and Epple (1990), who define the progress ratio as “marginal cost relative to its former value after doubling output”. For example, if the progres ratio is $p=0.80$, this means that the marginal cost falls by $20\%$ after doubling output. The figure below shows the distribution of progress ratios in 108 industries in the US.



1. What does $p\leq 100\%$ mean? What does $p>100\%$ mean?
2. According to answer in part (a), what does the graph above tell us?
3. If the production technology is $Q\left(L\right)=L^{B}$, then what is the progress ratio? (Hint: Cost is $C\left(Q\right)=w Q^{\frac{1}{β}}$ and the marginal cost is $MC=\frac{w}{β} Q^{\frac{1}{β}-1}.$)