## MICRO ECONOMICS

## Formulas

| Q | TFC | AFC | TVC | AVC | TC | ATC | MC |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| at any | $=\mathrm{TC}-\mathrm{TVC}$ | =TFC/Q | $=T C-$ TFC | $=\mathrm{TVC} / \mathrm{Q}$ | $=$ TFC + TVC | $=T C / Q$ | $\Delta T C / \Delta Q$ |
| of | OR | OR | OR | OR | OR | OR | OR |
|  | $=A F C$ * Q | =ATC-AVC | $=A V C * Q$ | $=\mathrm{ATC}-\mathrm{AFC}$ | $=A T C * Q$ | $=A F C+A V C$ | $\Delta \mathrm{TVC} / \Delta \mathrm{Q}$ |


| AFC | $=$ Average Fixed Cost |
| ---: | :--- |
| ATC | $=$ Average Total Cost |
| AVC | $=$ Average Variable Cost |
| D | $=$ Demand |
| MC | $=$ Marginal Cost |
| MR | $=$ Marginal Revenue |
| P | $=$ Price |
| Q | $=$ Quantity |
| TC | $=$ Total Cost |
| TFC | $=$ Total Fixed Cost |
| TR | $=$ Total Revenues |
| TVC | $=$ Total Variable Cost |


| Q | *MR | TR | P |
| :---: | :---: | :---: | :---: |
| at any <br> level of output | $\Delta T R / \Delta Q$ <br> OR <br> P | $=P * Q$ | same at any <br> Level of output unless told differently in the problem |

*P: Purely Competitive Firms (Price Takers): MR = P = D
Firms with market power (Price Makers): MR<P

