Activity 4.15.

Read the text; calculate the average total cost (ATC), average variable cost (AVC), marginal cost (MC), fixed cost (FC) and variable cost (VC) from the table below; and draw graphs of these cost curves.

Total Costs (TC) = Fixed Costs (FC) + Variable Costs (VC). FC do not change with output, e.g. the rent of a building. VC do vary with output, e.g. material costs. Average Total Cost (ATC) = Average Fixed Cost (AFC) + Average Variable Cost (AVC). The Marginal Cost is the extra cost of producing another unit. In the short run, marginal cost and marginal product are inversely related and there is the law of diminishing returns (when an additional unit of a variable factor such as labour is added to a fixed factor such as capital, the marginal product will eventually diminish). AFC (= FC/q) falls as more units are made. AVC (= VC/q) is U shaped because the variable factor becomes more productive at first and then becomes less productive. If Marginal Cost > Average Total Cost, then Average Total Cost rises. If Marginal Cost is below Average Total Cost, then Average Total Cost falls. This means that the marginal cost crosses the average total cost at its minimum point.

Output	Total Cost	FC	VC	ATC	AVC	MC
0	60					
1	90					
2	130					
3	200					
4	300					
5	500					