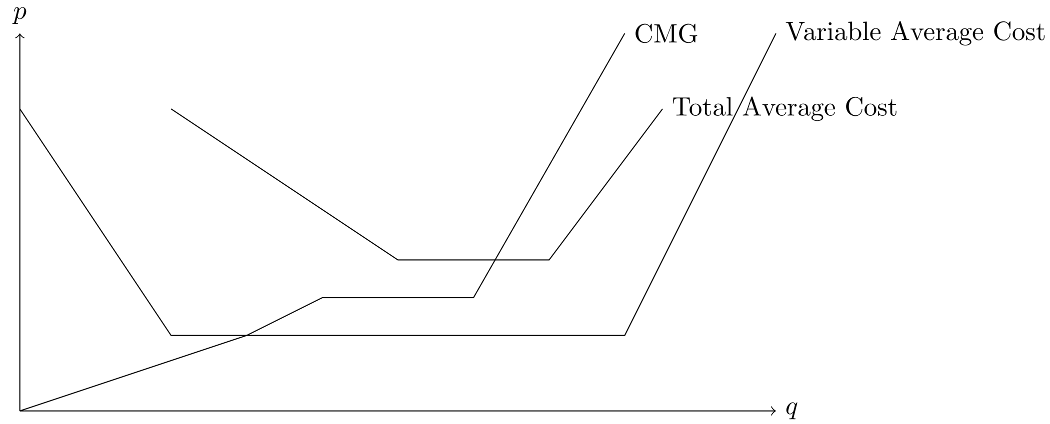
Graphical exercise on cost curves

Given the following graph, you are asked to:

1. Mark the break-even point and shut-down point.
2. Mark the firm's supply curve.
3. Explain what the break-even point and shut-down point are.



Solution

The break-even point in producer theory refers to the situation where a company neither makes a profit nor a loss. This point is found when marginal cost = Total Average Cost. On the other hand, the shut-down point is found when marginal cost = Variable Average Cost. At the total average cost point, what is happening is that the company is covering its total costs (which includes fixed costs), in this situation it obtains zero profit. While at the other point, the firm is only covering its average variable costs, and although it can operate in the short term, in the long term it should have lower fixed costs in order to cover its total average costs. Even though in accounting terms the profits are negative when marginal cost = Variable Average Cost, the firm would be worse off in case of not producing anything, as at this point it can cover a part of the fixed costs even though these are large enough to achieve a negative profit. The firm's supply curve, on the other hand, starts from the shut-down point and is given by the marginal cost.