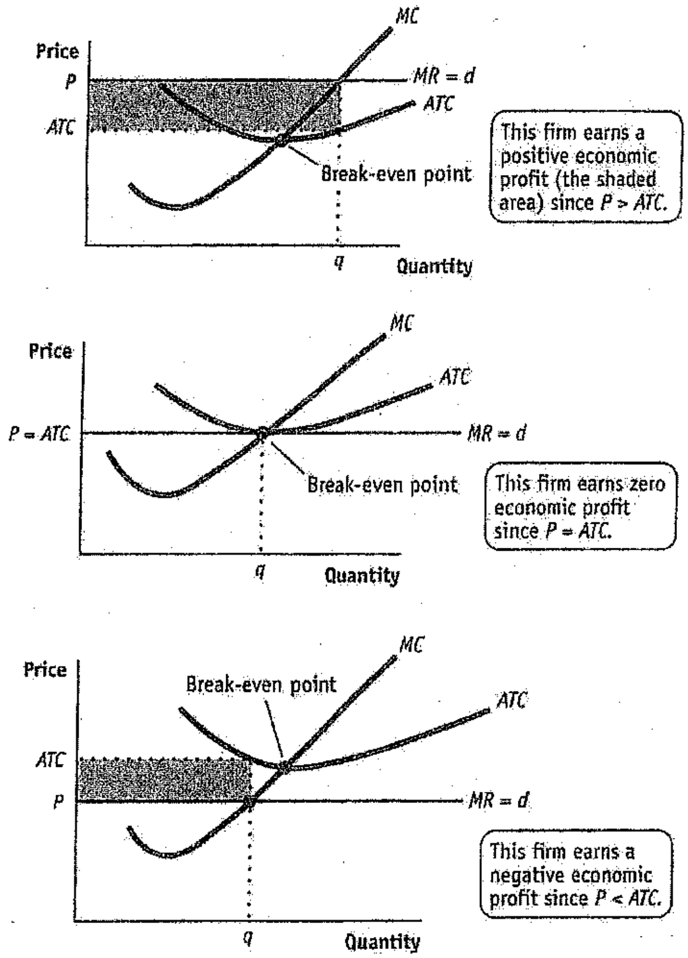

- The profitability conditions for a perfectly competitive firm can be summarized as follows:

  When $P >$ minimum *ATC*, the firm earns a positive economic profit in the short run and firms enter the industry in the long run.

  When $P =$ minimum *ATC*, the firm earns zero economic profit in the short run and firms do not enter or exit the industry in the long run.

  When $P <$ minimum *ATC*, the firm earns a negative economic profit in the short run and firms exit the industry in the long run.

- The production conditions for a perfectly competitive firm can be summarized as follows:

  When $P <$ minimum *AVC* (the shut-down price), the firm shuts down production in the short run because it cannot cover its variable cost of production. The firm's profit when it produces 0 units of output in the short run is the negative of its fixed cost.

  When $P >$ minimum *AVC* (the shut-down price), the firm produces at the point which $MC = MR$ in the short run. If $P <$ minimum *ATC* but is still above the minimum *AVC*, the firm is covering all of its variable cost and part of its fixed cost.