

KIA Fresh Graduates Program - Economics

Case Study: Apex Tools

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Apex Tools is a mid-sized company specializing in the production of high-quality small machines and tools used for various metal works. Founded in 1995, Apex has grown steadily over the years. The company prides itself on its commitment to quality, customer satisfaction, and continuous improvement.

Apex Tools operates in a highly competitive market, facing challenges from both domestic and international competitors. To maintain its market position and drive profitability, the company must carefully manage its production processes, costs, and pricing strategies.

The following case study explores various aspects of demand and supply analysis, focusing on cost structure, breakeven and shutdown points, and profitability. Students are required to analyze Apex Tools' operations using the provided information and answer the questions based on their calculations.

Apex Tools' cost structure (in thousand USD) for one of its products is as follows:

Q	P	TR	MR	TC	TFC	TVC	ATC	AFC	AVC	MC	Profit
0.0	8.0			15.0	15.0						
1.0	8.0			15.5	15.0						
2.0	8.0			16.8	15.0						
3.0	8.0			18.9	15.0						
4.0	8.0			22.9	15.0						
5.0	8.0			28.9	15.0						
6.0	8.0			37.9	15.0						
7.0	8.0			50.9	15.0						
8.0	8.0			65.9	15.0						

1. Use Excel to complete the table (3 pts).
2. By what production level does Apex Tools break even? (1 pt)
3. Determine the region of profitability. (1 pt).
4. Use Excel to plot in one graph MR, ATC, AFC, AVC and MC as a function of output. (2 pts)
5. At what point profit is maximized? Discuss what happens at this point in terms of MR and MC. (2 pts)

The case study is graded on 10 points. 9 points are graded as a group and 1 point will be awarded for individual assessment.