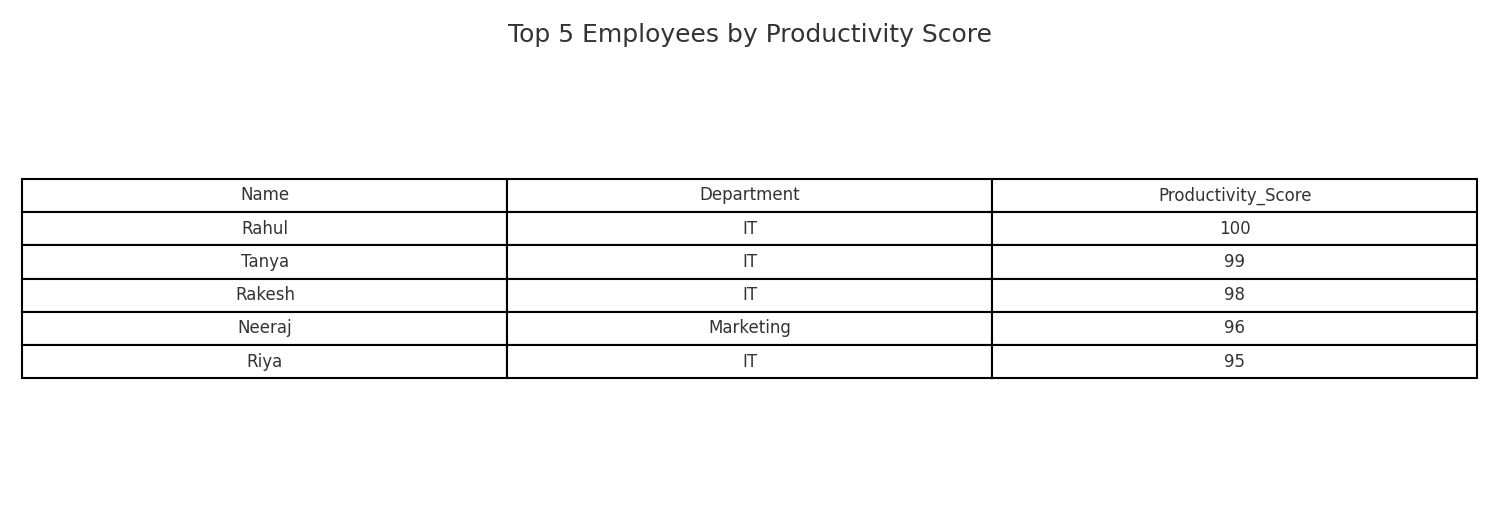
# Employee Work Productivity Analysis - Solutions (Q&A)

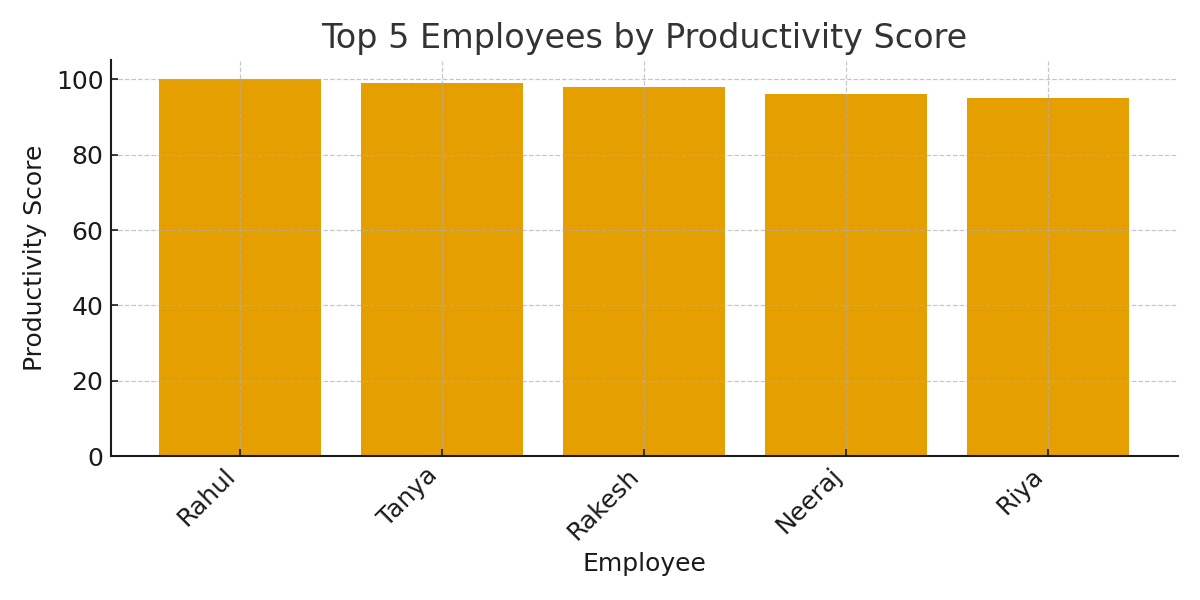
## Q1: Top 5 Productive Employees

Answer: Used SORT/FILTER logic to rank employees by Productivity\_Score and display top 5.  
Excel formula example: =SORT(A2:G100, <column\_of\_Productivity\_Score>, -1)

Top 5 employees (table):



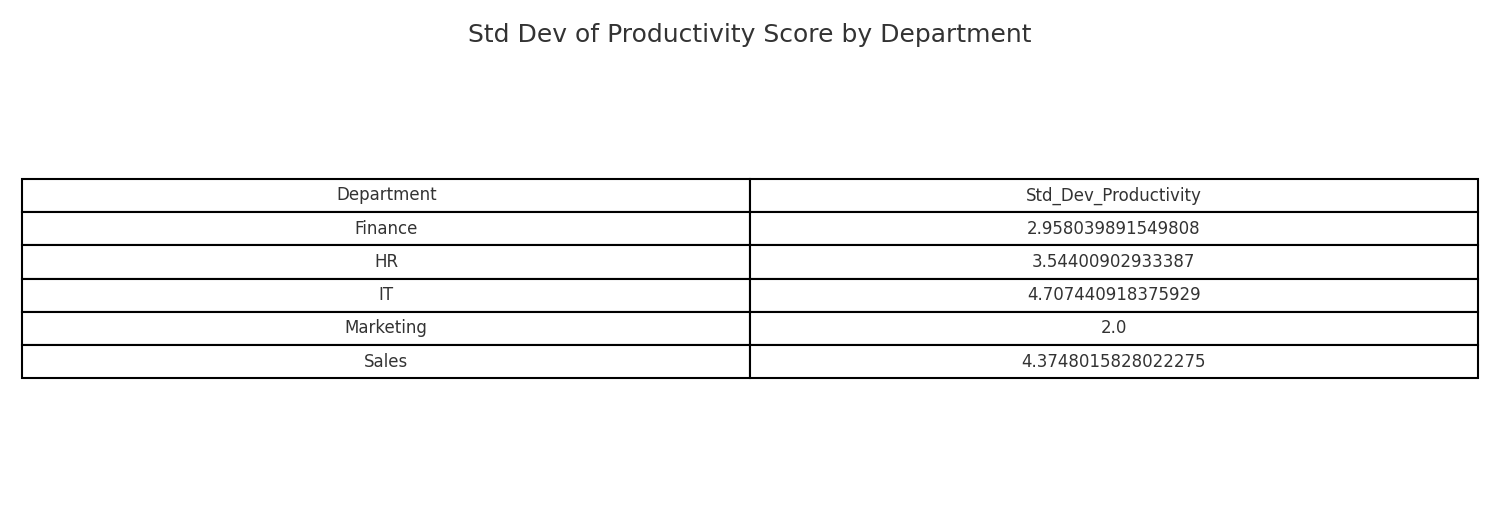
Bar chart visualization:



## Q2: Department-wise Productivity Consistency (Std Dev)

Answer: Calculated population standard deviation (STDEV.P) of Productivity\_Score within each department using a PivotTable or formula.  
Excel formula example: =STDEV.P(IF(DepartmentRange=DeptName, ProductivityRange))

Std deviation by department:

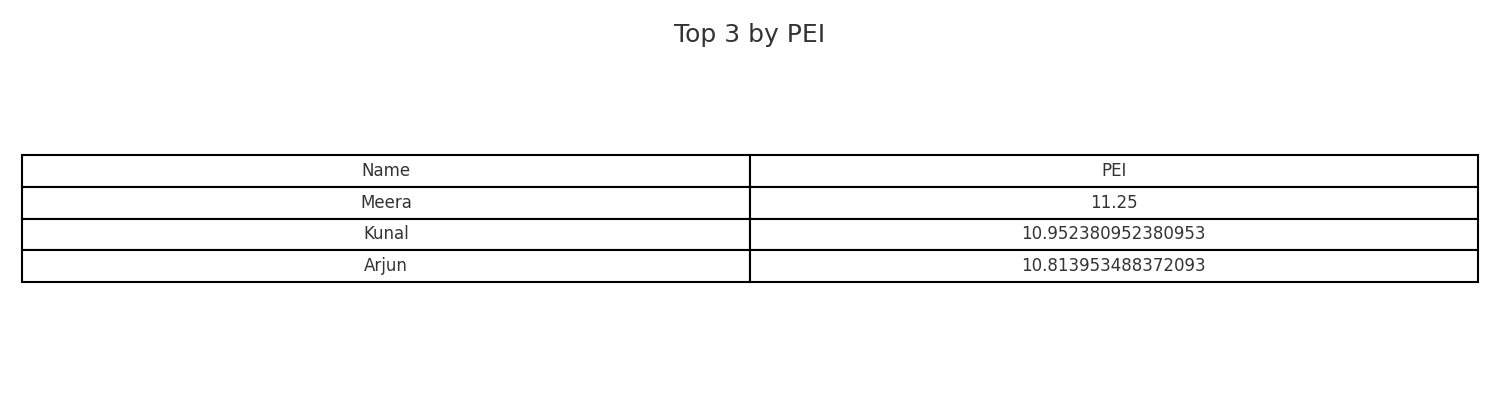


Department with least variation: Marketing (Std Dev = 2.0000)

## Q3: Productivity Efficiency Index (PEI) and Top 3

Answer: PEI calculated as PEI = (Productivity\_Score × Performance\_Rating) / Hours\_Worked.  
Excel formula example: = (E2 \* F2) / D2

Top 3 employees by PEI:



## Q4: Correlation Analysis - Influence on Performance Rating

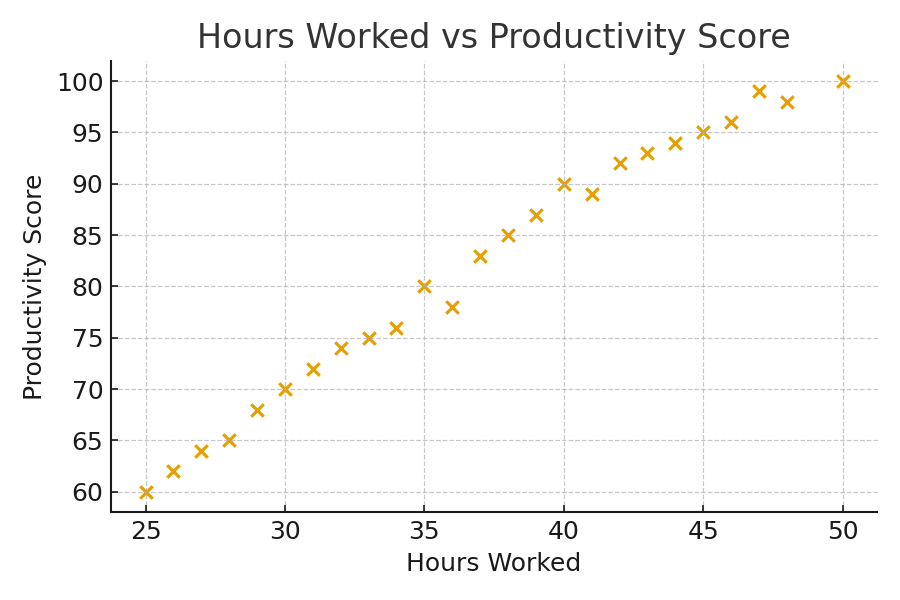
Answer: Compared correlation coefficients between Performance\_Rating vs Hours\_Worked and Performance\_Rating vs Tasks\_Completed using CORREL.  
Excel formula examples:  
=CORREL(Performance\_Rating\_Range, Hours\_Worked\_Range)  
=CORREL(Performance\_Rating\_Range, Tasks\_Completed\_Range)

Correlation (Performance\_Rating vs Hours\_Worked): 0.9462348583818776

Correlation (Performance\_Rating vs Tasks\_Completed): 0.9574553703647626

Stronger influence on Performance\_Rating: Tasks\_Completed

Scatter plot Hours Worked vs Productivity Score:

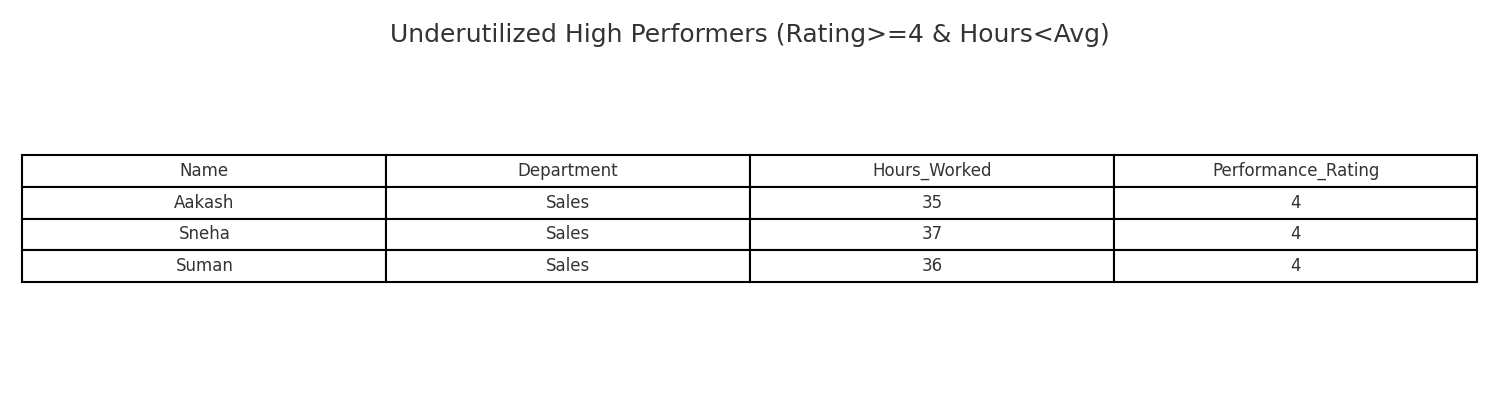


## Q5: Underutilized High Performers

Answer: Identified employees with Performance\_Rating ≥ 4 and Hours\_Worked < Average Hours.  
Excel formula example: =FILTER(TableRange, (Performance\_Rating>=4)\*(Hours\_Worked<AVERAGE(Hours\_WorkedRange)))

Average hours across employees: 37.04

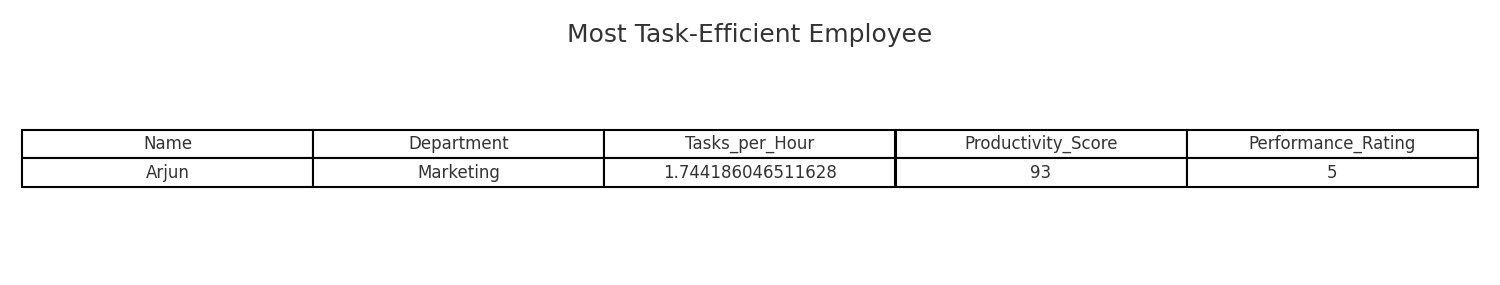
Underutilized high performers (table):



## Q6: Tasks per Hour Efficiency

Answer: Added column Tasks\_per\_Hour = Tasks\_Completed / Hours\_Worked.  
Excel formula example: =C2 / D2

Most task-efficient employee:



Notes & Assumptions:

- Numeric coercion: Columns Hours\_Worked, Tasks\_Completed, Productivity\_Score, Performance\_Rating were converted to numeric; non-numeric entries treated as missing.  
- PEI and Tasks\_per\_Hour calculations skip rows with missing/zero hours to avoid division errors.