Abdullah Amin Tableau Final

Problem Statement: To identify challenges faces in the production process of garments and analyze performance with regards to departments, teams, and months. Also understand what teams are underworked and overpaid and how their productivity varies with regards to time.

Data Wrangling

Attribute Information:

01 date : Date in MM-DD-YYYY
02 day : Day of the Week
03 quarter : A portion of the month. A month was divided into four quarters
04 department : Associated department with the instance
05 team_no : Associated team number with the instance
06 no_of_workers : Number of workers in each team
07 no_of_style_change : Number of changes in the style of a particular product
08 targeted_productivity : Targeted productivity set by the Authority for each team for each day.
09 smv : Standard Minute Value, it is the allocated time for a task
10 wip : Work in progress. Includes the number of unfinished items for products
11 over_time : Represents the amount of overtime by each team in minutes
12 incentive : Represents the amount of financial incentive (in BDT) that enables or motivates a particular course of action.
13 idle_time : The amount of time when the production was interrupted due to several reasons
14 idle_men : The number of workers who were idle due to production interruption
15 actual_productivity : The actual % of productivity that was delivered by the workers. It ranges from 0-1.

I conducted a normal data wrangling on Excel by which I changed the columns mentioned:

date-OK

Day-OK

Quarter-OK

Department-OK

Team_no-OK

no_of_workers-ok

no_of_style_change:ok

targeted_productivity- Change in to %

smv-ok

wip-Fill empty columns with 0

over_time-ok

incentive-ok

idle_time:ok

idle_men:ok

no_of_workers-round off to 0 dp

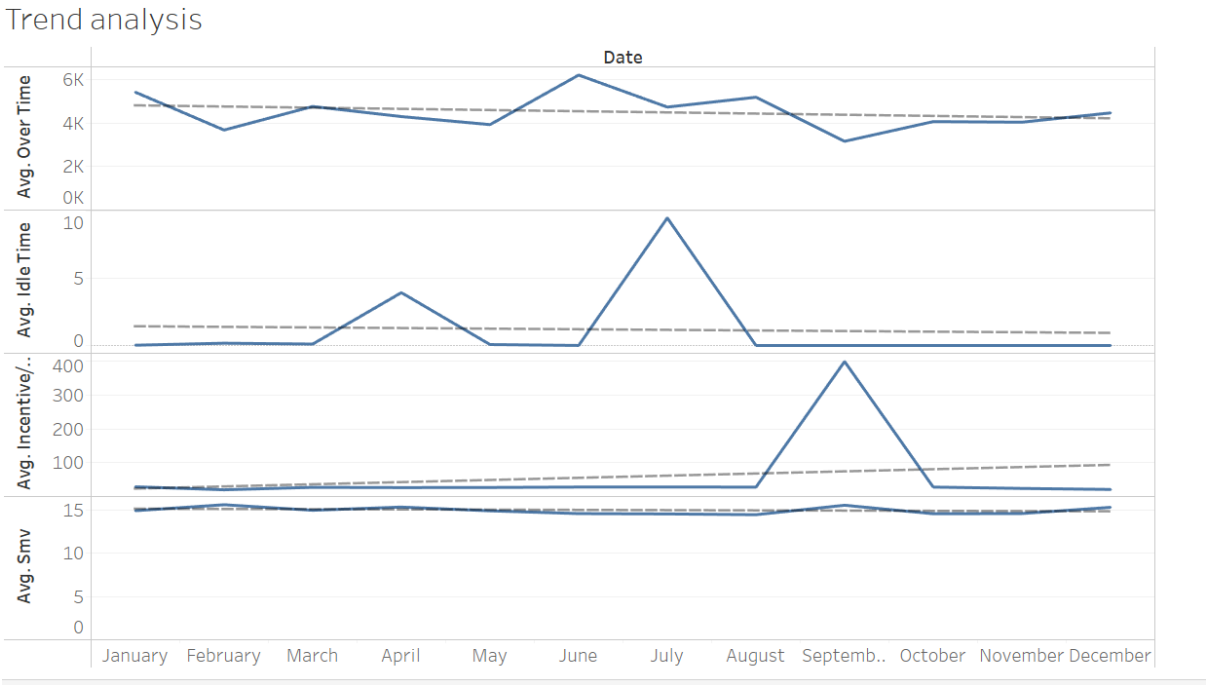
actual_produutivity:ok

Analysis:

Through the analysis I have made on Tableau, I will try to answer some questions which are important for the garment industry.

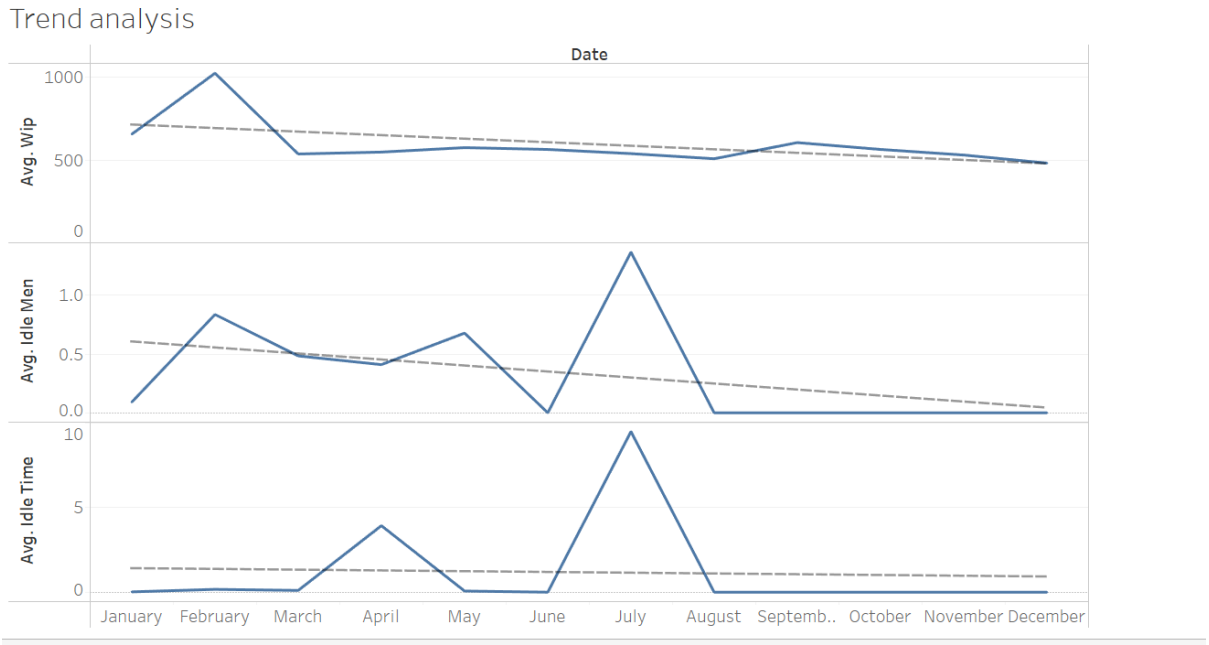
What are the trends with regards to different measures?

The over time has kept fluctuating throughout the months and has experiences a rise from May to September. There are peaks in the idle time from March to May and June to August which signals an interruption in the production process. From August to October the incentive increased.



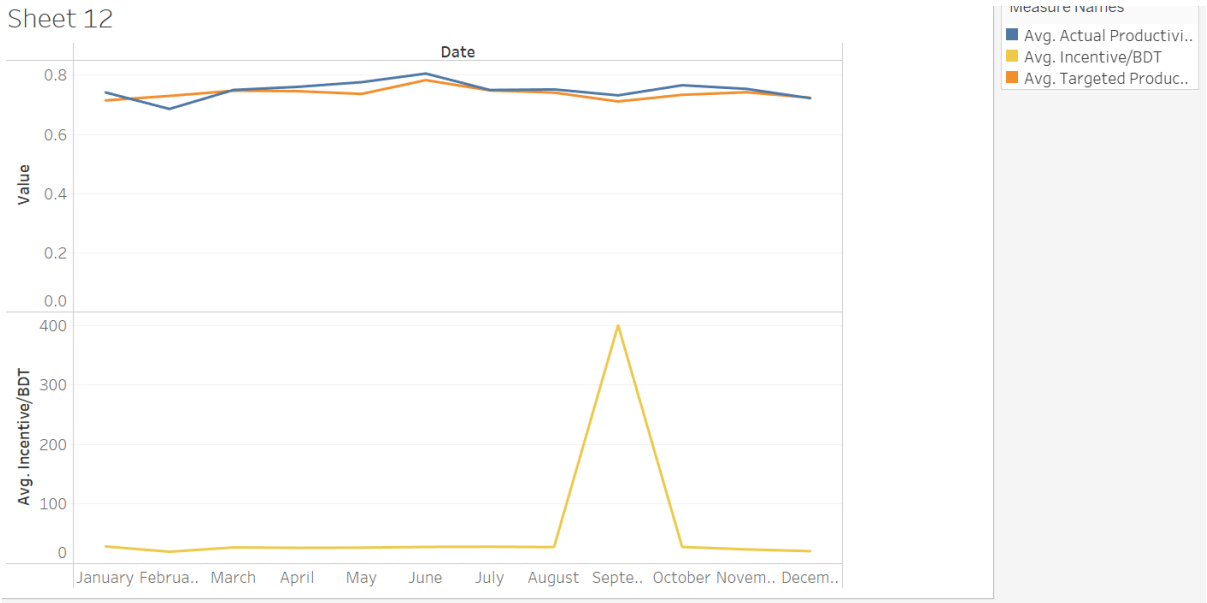
Do Idle men and idle type correlate?

As expected, the number of idle men increase alongside the idle time signifying a big problem in production processes during these months. However, the work in progress is maintained.



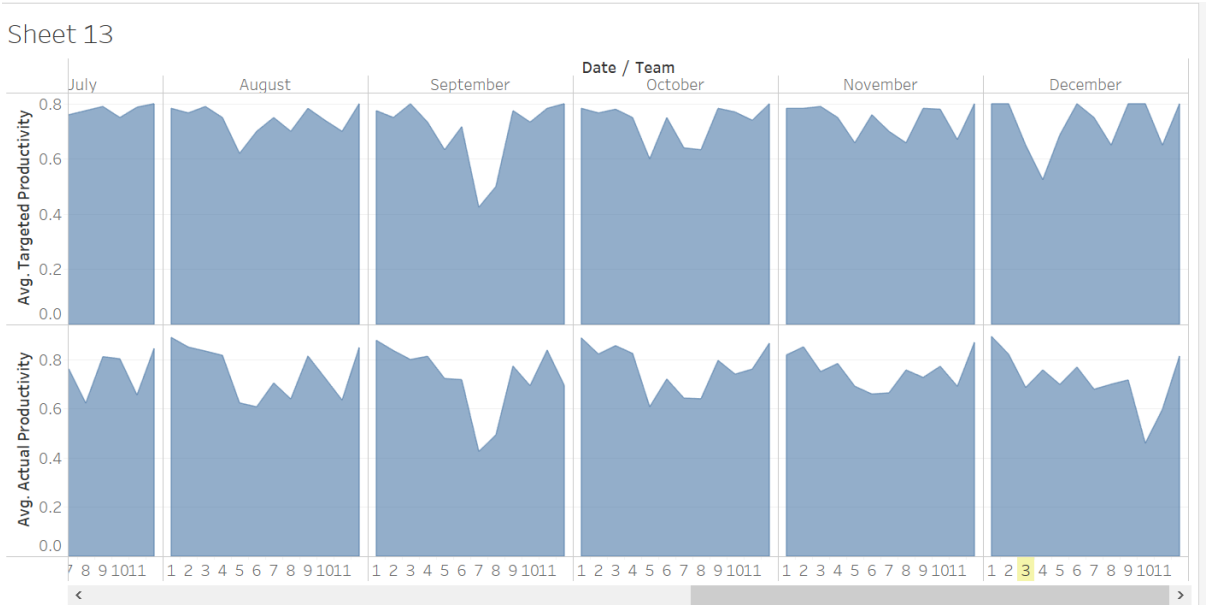
Does incentive correlate with productivity?

Although the productivity during these months is not extraordinary, there is still a rise in the incentives of the employees from August to October.



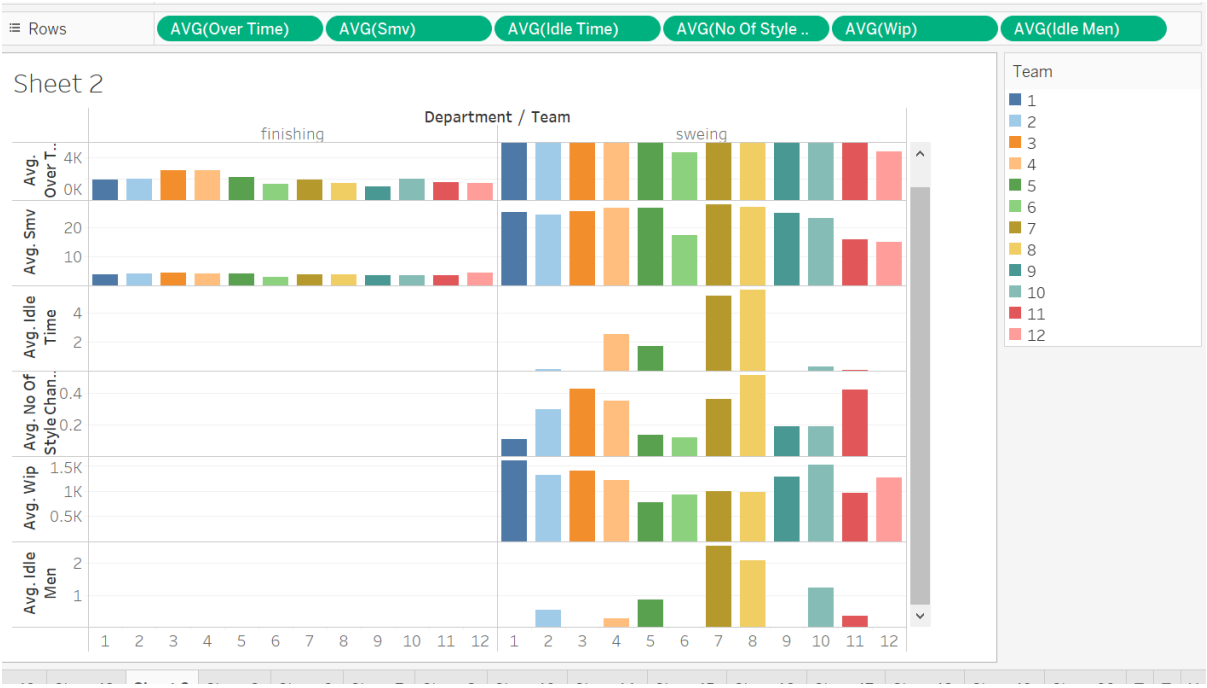
How are different teams performing in different months with regards to the productivity?

Team 7 experiences a lack in actual and targeted productivity in September which means this team is under utilized while team 10's performance has dipped in December.



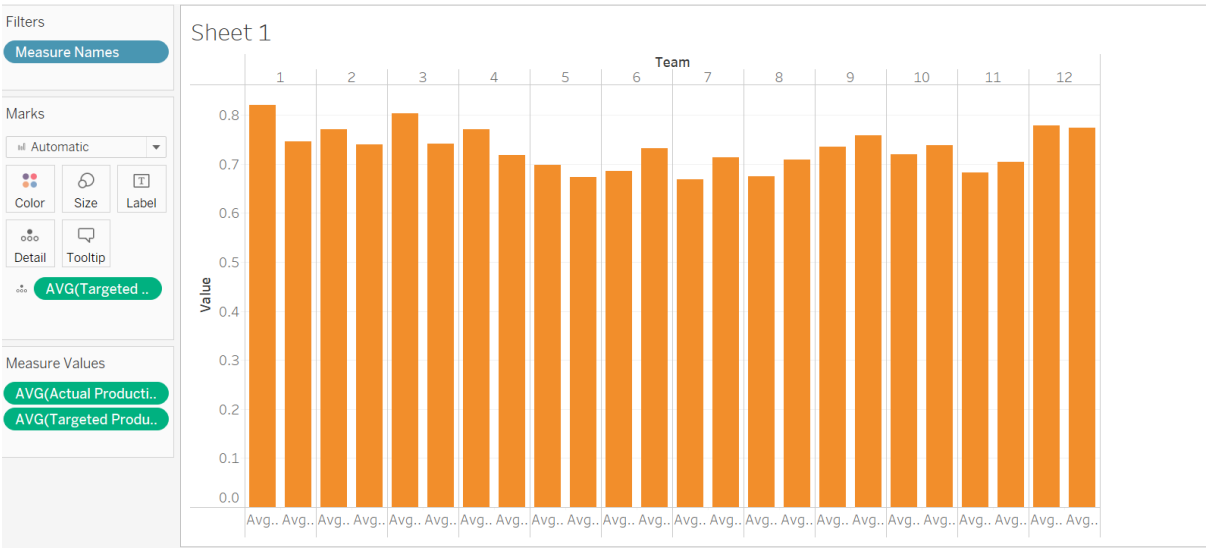
Is the sewing department creating a problem for the finishing department and its teams?

From the chart, we can see that sewing has the most overtime, work in progress etc. Teams 7 and 8 are most underutilized and this produces difficulty for the finishing process as they have a greater overtime because of interruptions and hence a greater smv.



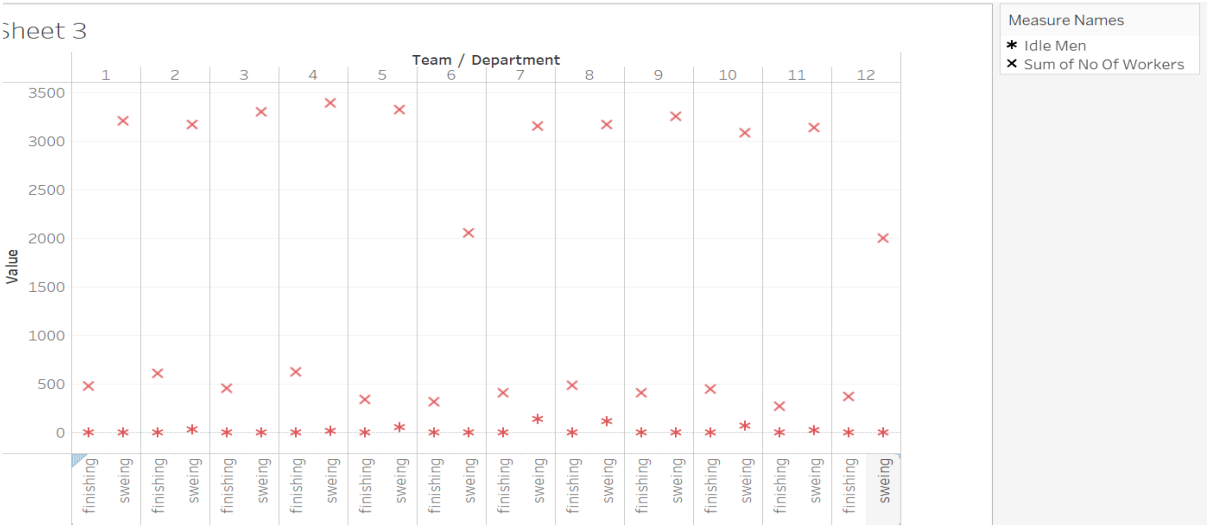
How are different teams performing with regards to the productivity and the expected productivity?

Teams 1,3 and 4 have exceptional actual productivity while 7 8 9 10 11 do not.



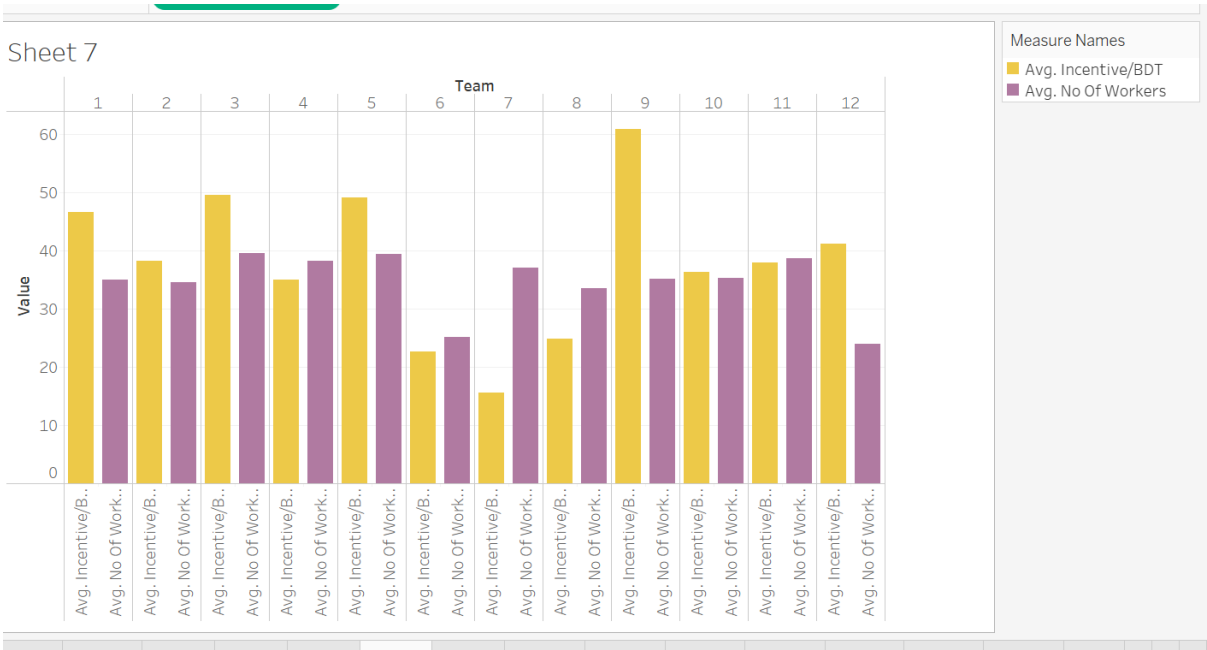
Is the workforce sitting idle? If yes then in which teams and departments?

Sewing team 7 and 8 have the idlest men.



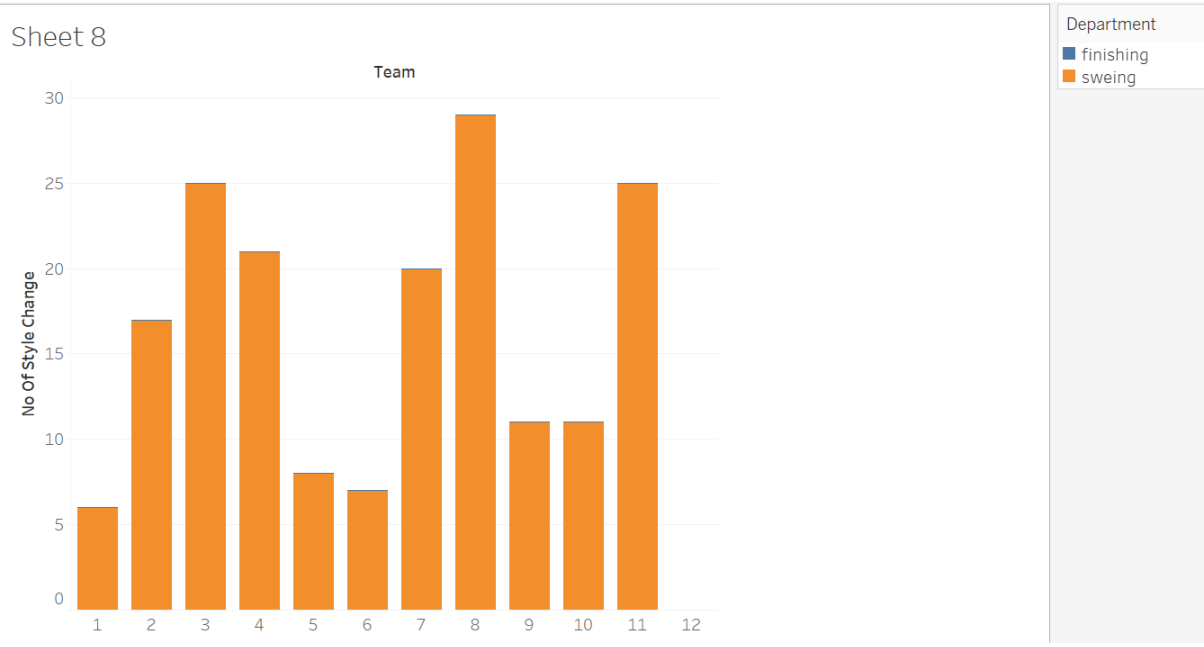
Which teams are paid well?

Team 9 has the greatest incentive for its workers.



Which teams changes the most number of styles?

Most number of style changes occur in sewing for team 8 with team 11 and 2 following. Note that team 4 and 3 only has style changes in the finishing department.

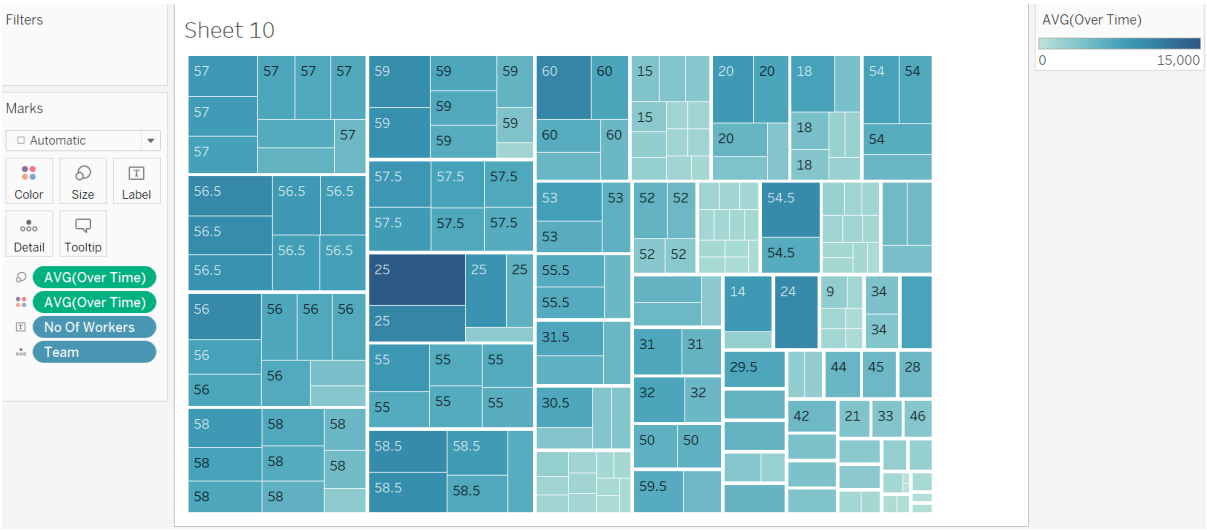


Which team has the highest work in process?

Team 3 has the highest smv and wip which means that they are not performing very well. The SMV for the 3 teams that are not performing well is almost the same.

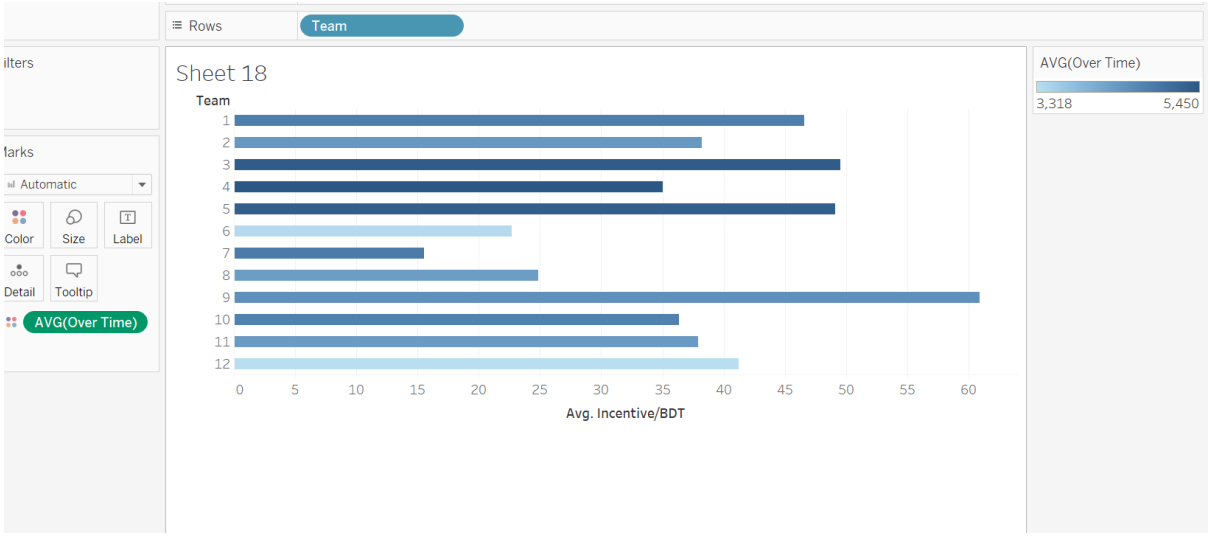
How are the workers paid in different teams and departments?

Team 1 with 25 workers is the most overworked and paid. Team 3 with 24 workers is overworked and underpaid. Both are these teams are in the finishing department.



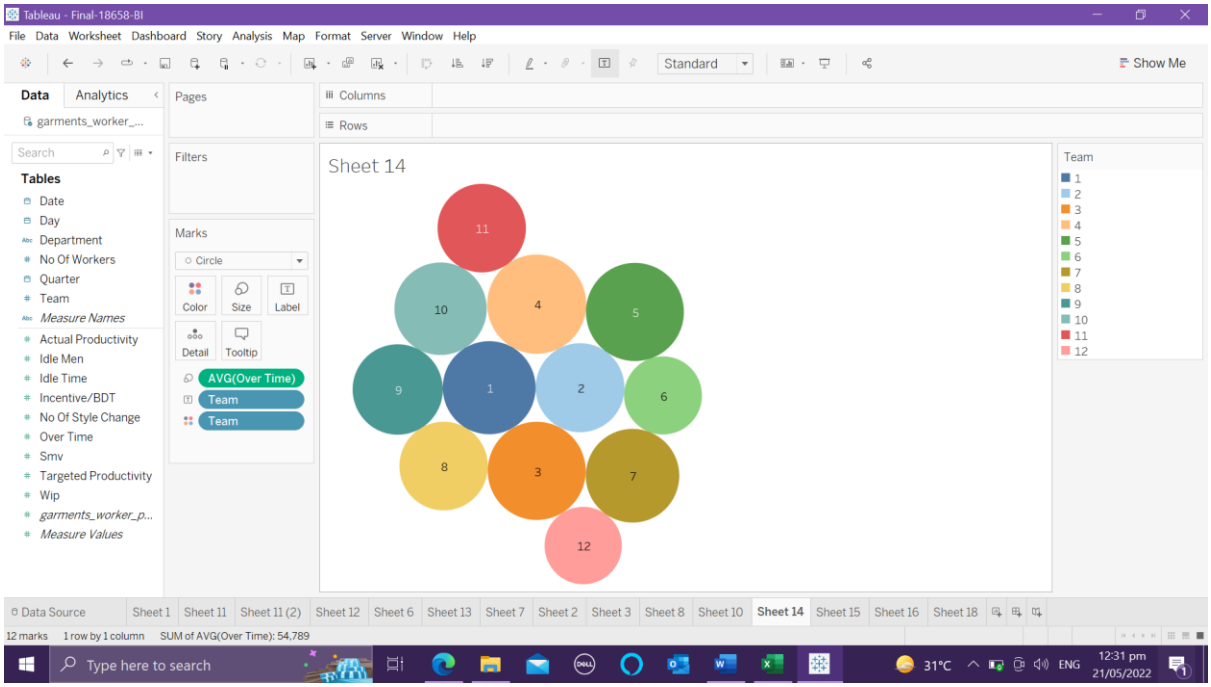
Are the workers who are overworked overpaid as well?

Team 9 has the highest incentive and normal over time. Team 3,4 and 5 have the most overtime and are not paid that well either.



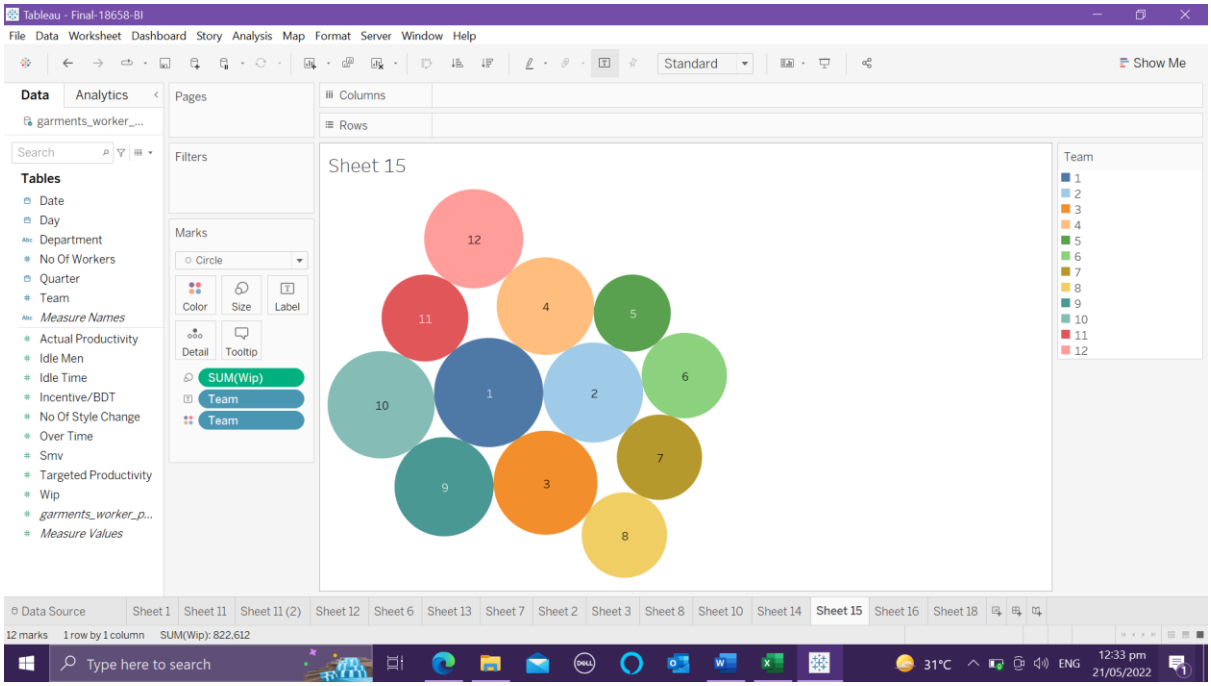
Which teams work the most and least overtime?

Teams 5, 4, 3 and 7 work the most overtime while teams 12 and 6 work the least.



Which teams have the most amount of work in progress?

Teams 1, 10 and 3 have the highest amount of work in progress.



Which teams in which department earned the highest?

In finishing, teams 5 and 9 earn the highest while in sewing, team 10 earned the highest.