## Reporting on the Gender Pay Gap


http://www.bbc.co.uk/news/business-43470827 (21st March 2018)

A small company operates in a building with three floors. It employs people in three different roles; administrators, supervisors and managers and there are people in each category on each floor. Administrators typically earn the least whilst managers typically earn the most.

## £££ Administrators < £££ Supervisors < £££ Managers

You job is to report on the average salaries on men and women in this company.

## Task 1

Can you put some numbers (salaries, in thousands) in each box so that, in each category, the meanaverage of the men's salaries is higher than the women's BUT the overall mean-average of the men's salaries is lower than that of the women's. It seems counter-intuitive at first but is possible.

Use the first grid overleaf, mean-averages must be higher in each of the green boxes please.

## Task 2

Using the same numbers as before. Can you arrange them so that, in each category, the meanaverage of the men's salaries is lower than the women's AND the overall mean-average of the men's salaries is also lower than the women's. Is this still possible if we said that each floor must have at least one administrator, one supervisor and one manager?

Use the second grid below, mean-averages must be higher in each of the green boxes please.

Stratified by job type

| Role | Men |  | Women |  |
| :---: | :---: | :---: | :--- | :--- |
| Administrators | Numbers: | Average: | Numbers: | Average: |
| Supervisors | Numbers: | Average: | Numbers: | Average: |
| Managers | Numbers: | Averge: | Numbers: | Average: |


| Total | Numbers: | Average: | Numbers: |
| :---: | :--- | :--- | :--- | Average:

What strategies worked well here? Why is this possible?

Stratified by place of work in building

| Role | Men |  | Women |  |
| :---: | :---: | :---: | :---: | :---: |
| Floor 1 | Numbers: | Average: | Numbers | Averase: |
| Floor 2 | Numbers: | Average: | Numbers | Averge: |
| Floor 3 | Numb | Average: | Numbers | Averge: |
| Total |  |  | Numbers | Averge: |

What strategies worked well here? Why is this possible?

## Task 3 and Task 4

Notice that in the graphic on page one, the article refers to median-average instead of meanaverage. This has the effect of smoothing out any exceptionally high salaries which would skew the mean-average. So, the task here is to repeat tasks 1 and 2 but using median-average figures instead. As before, this task is possible... but can you do it?!

More grids overleaf.

Stratified by job type - median-averages

| Role | Men |  | Women |  |
| :---: | :--- | :---: | :--- | :--- |
| Administrators | Numbers: | Averge: | Numbers: | Average: |
| Supervisors | Numbers: | Averge: | Numbers: | Average: |
| Managers | Numbers: | Average: | Numbers: | Average: |
| Total | Numbers: | Average: | Numbers: | Average: |

What strategies worked well here? Why is this possible?

Stratified by place of work in building - median-averages

| Role | Men |  | Women |  |
| :---: | :---: | :---: | :--- | :---: |
| Floor 1 | Numbers: | Average: | Numbers: | Averge: |
| Floor 2 | Numbers: | Average: | Numbers: | Average: |
| Floor 3 | Numbers: | Averge: | Numbers: | Averge: |
| Total | Numbers: | Averge: | Numbers: | Averge: |

What strategies worked well here? Why is this possible?

