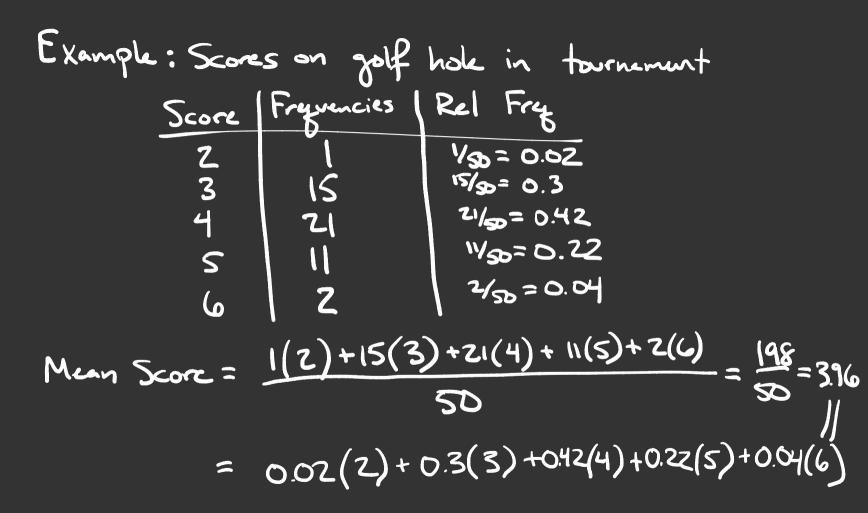
Types of averages:
• Mean
$$\leftarrow$$
 Most common
• Median
• Mode
The mean of n numbers $X_{11}X_{2},...,X_n$ is given by
 $M = \frac{X_1 + X_2 + \dots + X_n}{n}$
Example: The men of $Z_13, S_17, 9$ is
 $\frac{2+3+5+7+9}{5} = \frac{240}{5} = 5.2$



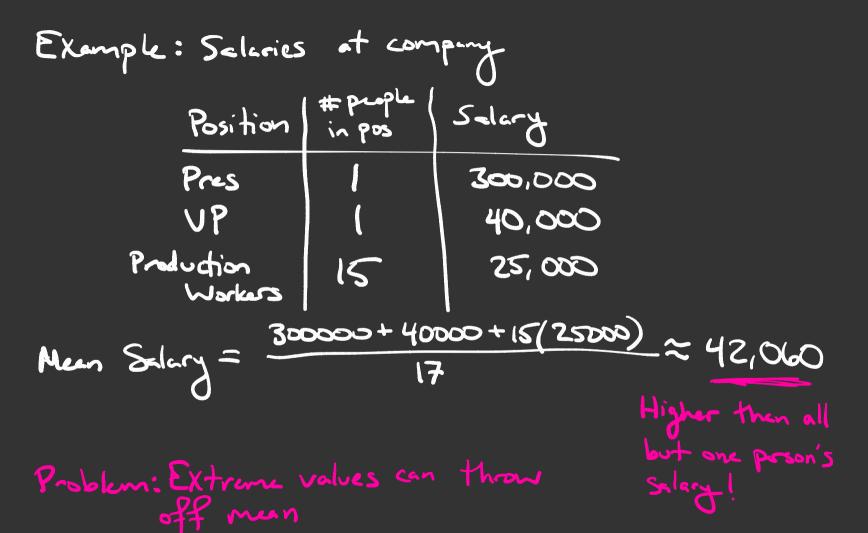
Example: Test Score
Scores Friguency
SD-57 | 1 Can't compute the
Wo-69 Z men exectly, but an
70-79 3 approximate

$$30-69$$
 Z men exectly, but an
 $70-79$ 3 approximate
 $30-69$ Z men exectly, but an
 $70-79$ 3 approximate
 $90-100$ 4 $60-69$
Mean Score = $\frac{1(54.5) + 2(64.5) + 3(74.5) + 5(84.5) + 4(95)}{15}$
= 80.63

$$M_{cen} = \frac{\chi_{1} + \chi_{2} + \chi_{3} + \chi_{1} + \chi_{2}}{5} = \frac{\chi_{1} + \chi_{2} + \chi_{3}}{5} + \frac{\chi_{1} + \chi_{2}}{5}$$

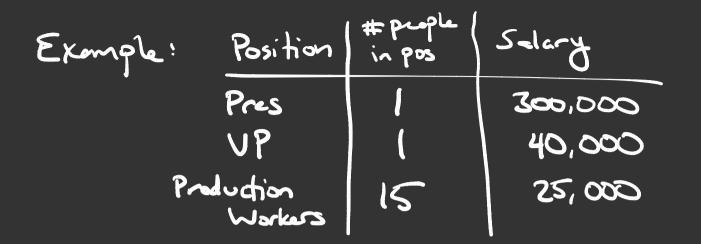
$$= \frac{\chi_{1} + \chi_{2} + \chi_{3}}{3} \left(\frac{3}{5}\right) + \frac{\chi_{1} + \chi_{2}}{2} \left(\frac{2}{5}\right)$$

$$= 80 \left(\frac{3}{5}\right) + 90 \left(\frac{2}{5}\right) = \frac{80(3) + 90(2)}{5}$$



The median is the middle number after the
numbers have been arranged in order
Example: \$7,64,68,71,73,79,80
Median = 71
Example: \$7,64,68,71,73,79
Median =
$$\frac{68+71}{2} = \frac{139}{2} = 69.5$$

Intuition: Median essentially divides the data points in
helf



Median = 25000

The mode (s) of a data set is the value that occurs the most often (can be more then one value) Example: 1,1,1,2,3,4,4,5,5,5,6,7,8,8 Mode = 1,5 Example: Mode Salary = 25,000