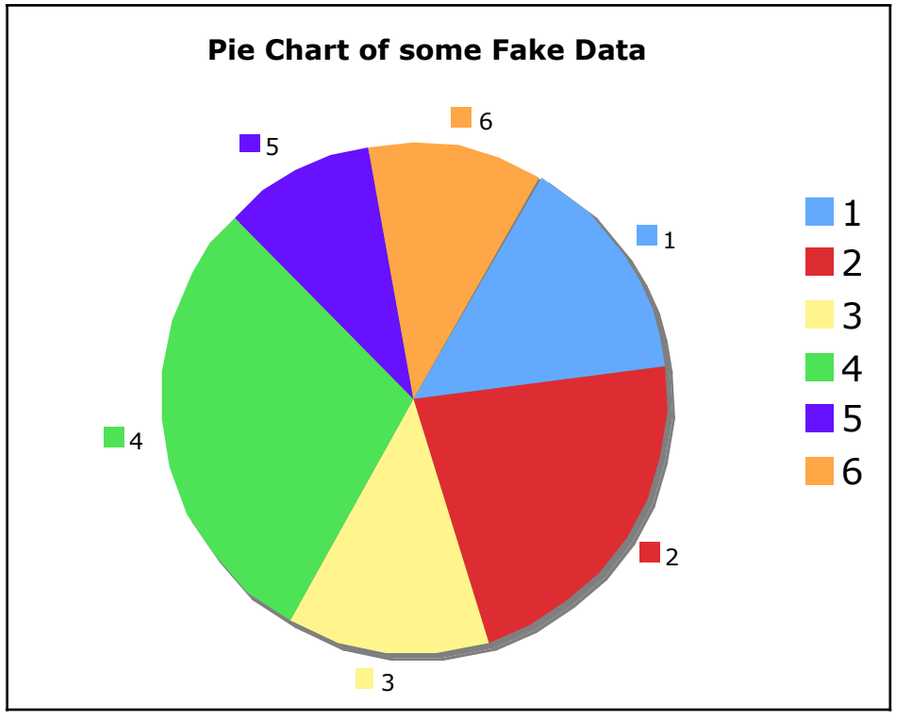
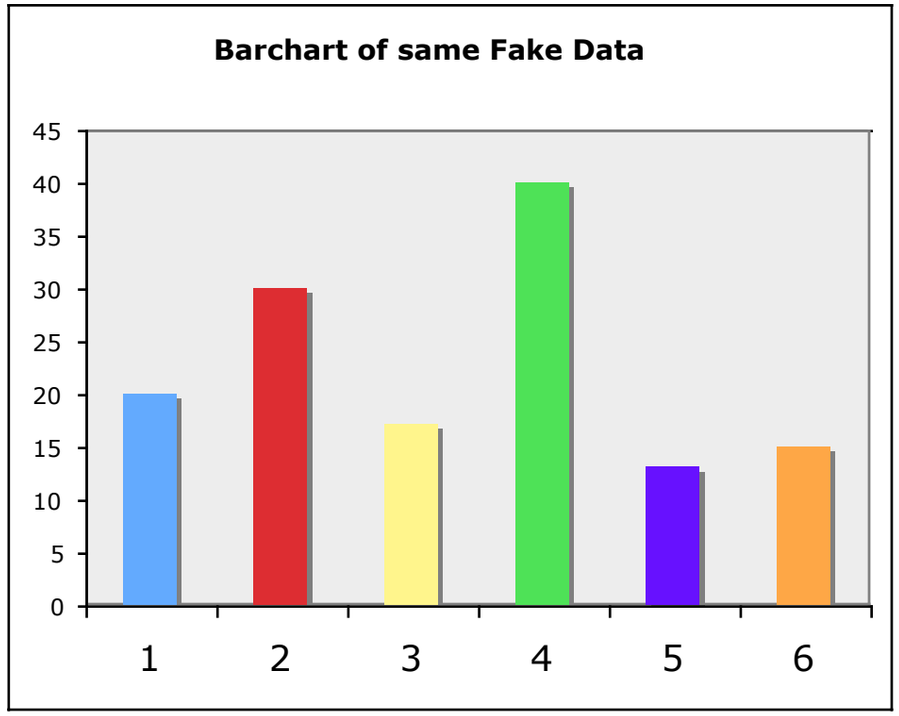
Why no pies?

Face-off: Bar vs Pie

- What tasks are involved?





Area is proportional to value

comparison of angles,
curve length

comparison of heights,
positions along a common scale

Ranking of perceptual tasks

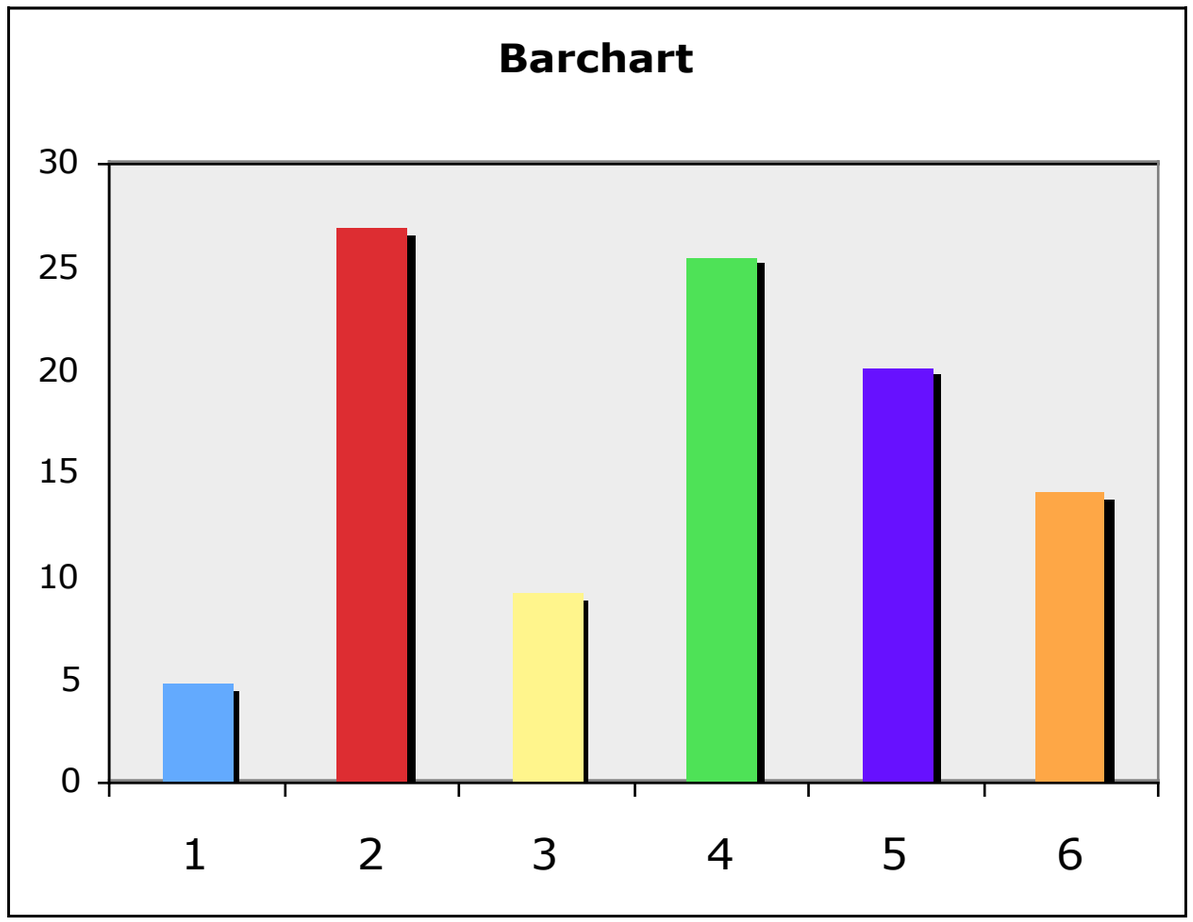
- usually we are not interested in exact quantities
- ... But ... use accuracy as measure

Cleveland & McGill premise:

A graphical form that involves elementary perceptual tasks that lead to more accurate judgments than another graphical form (with the same quantitative information) will result in a better organization and increase the chances of correct perception of patterns and behavior.

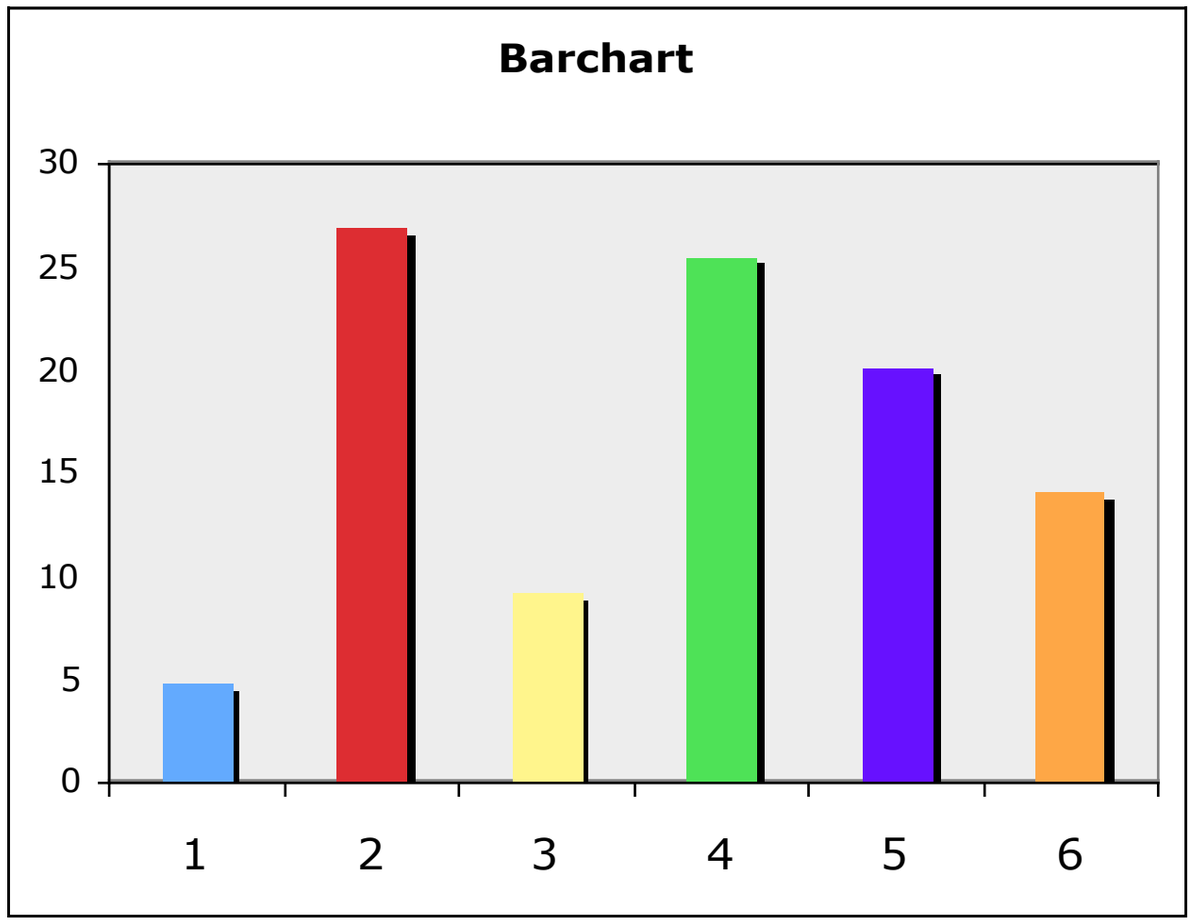
Positions along a common scale

Determine the values for bins 1 to 6 as accurately as possible



Positions along a common scale

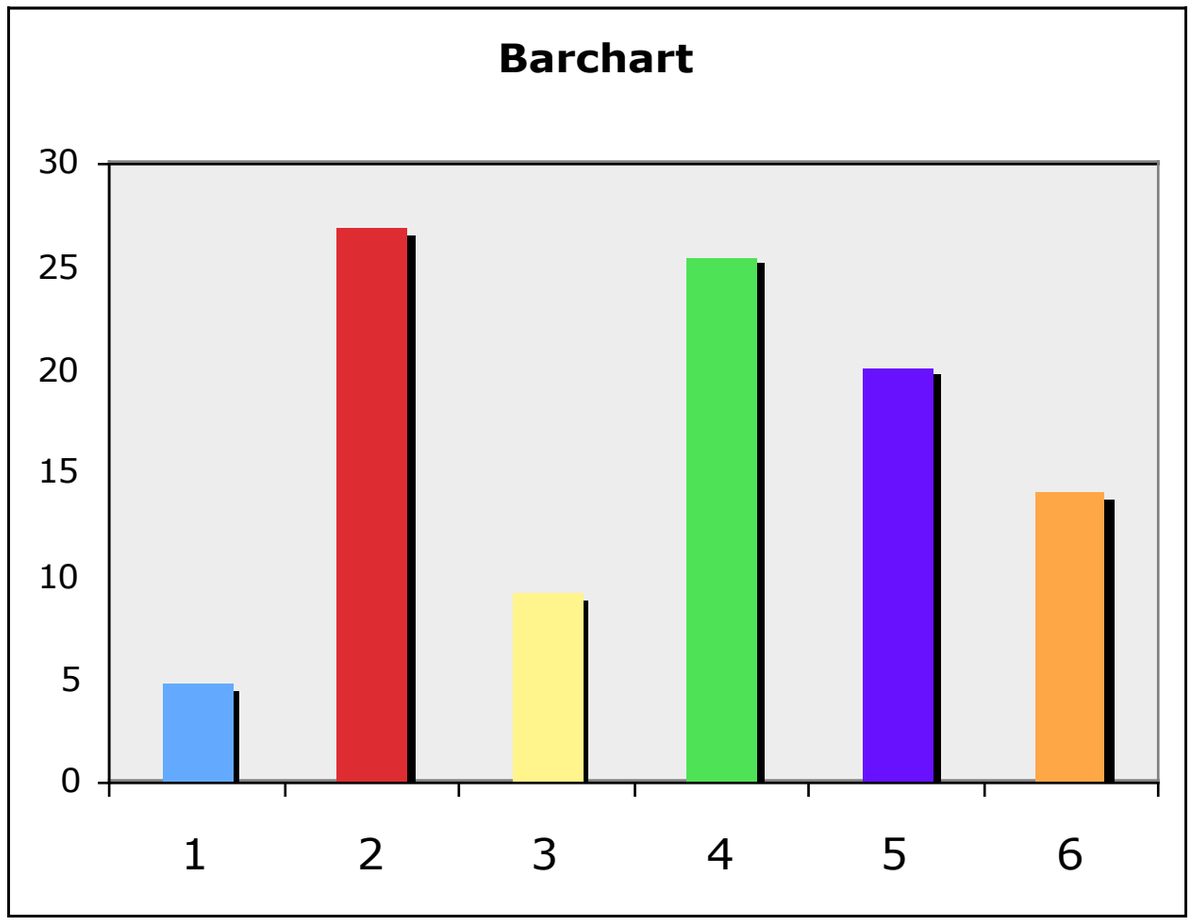
Determine the values for bins 1 to 6 as accurately as possible



Bin	Value
1	5
2	27
3	9
4	25
5	20
6	14

Positions along a common scale

Determine the values for bins 1 to 6 as accurately as possible

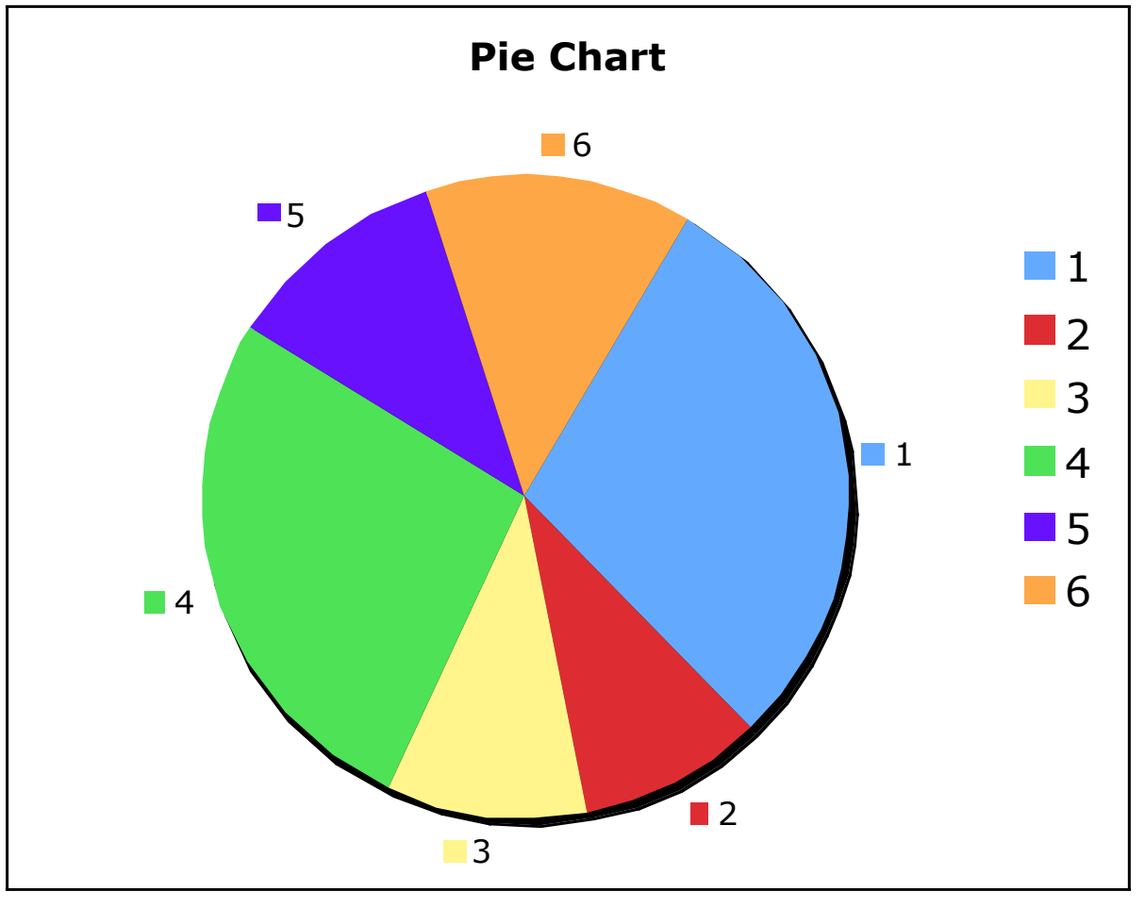


Bin	Value
1	5
2	27
3	9
4	25
5	20
6	14

write down differences between true values and your estimates

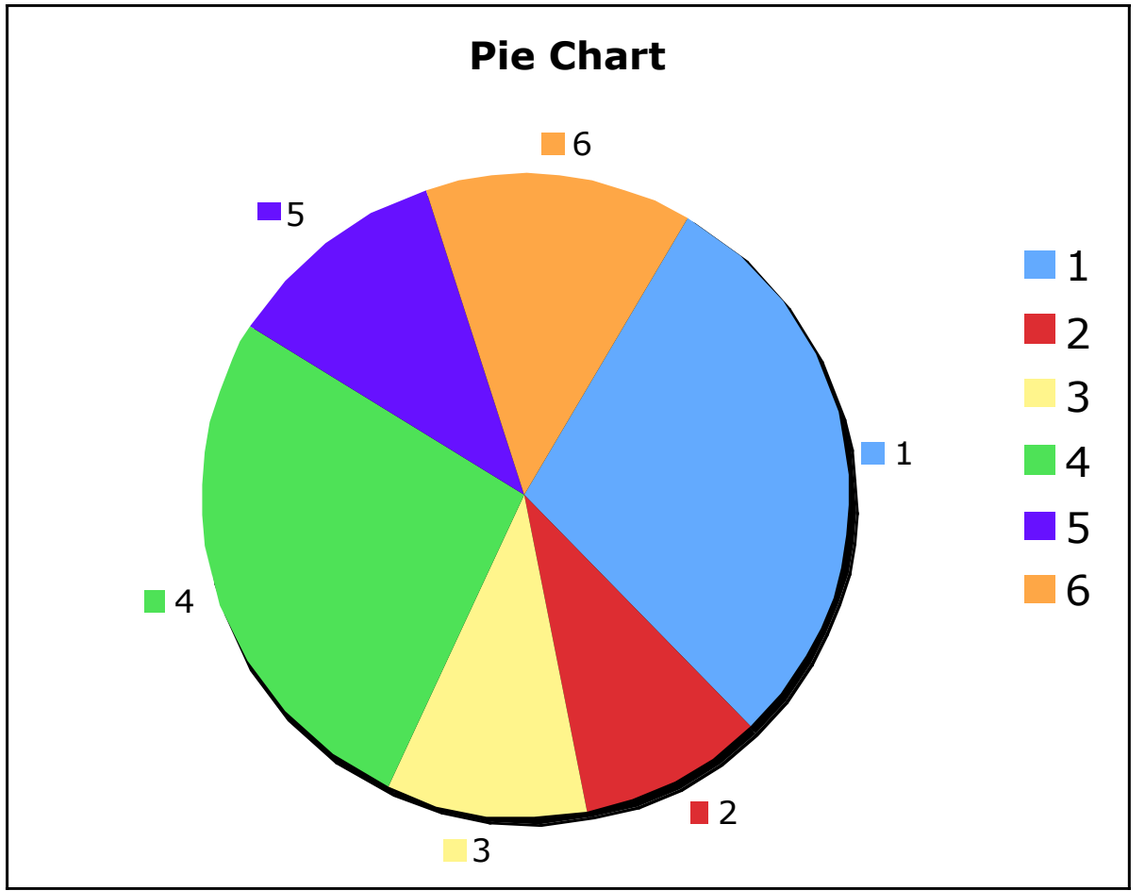
Angle comparisons

Determine the percentage for slices 1 to 6 as accurately as possible



Angle comparisons

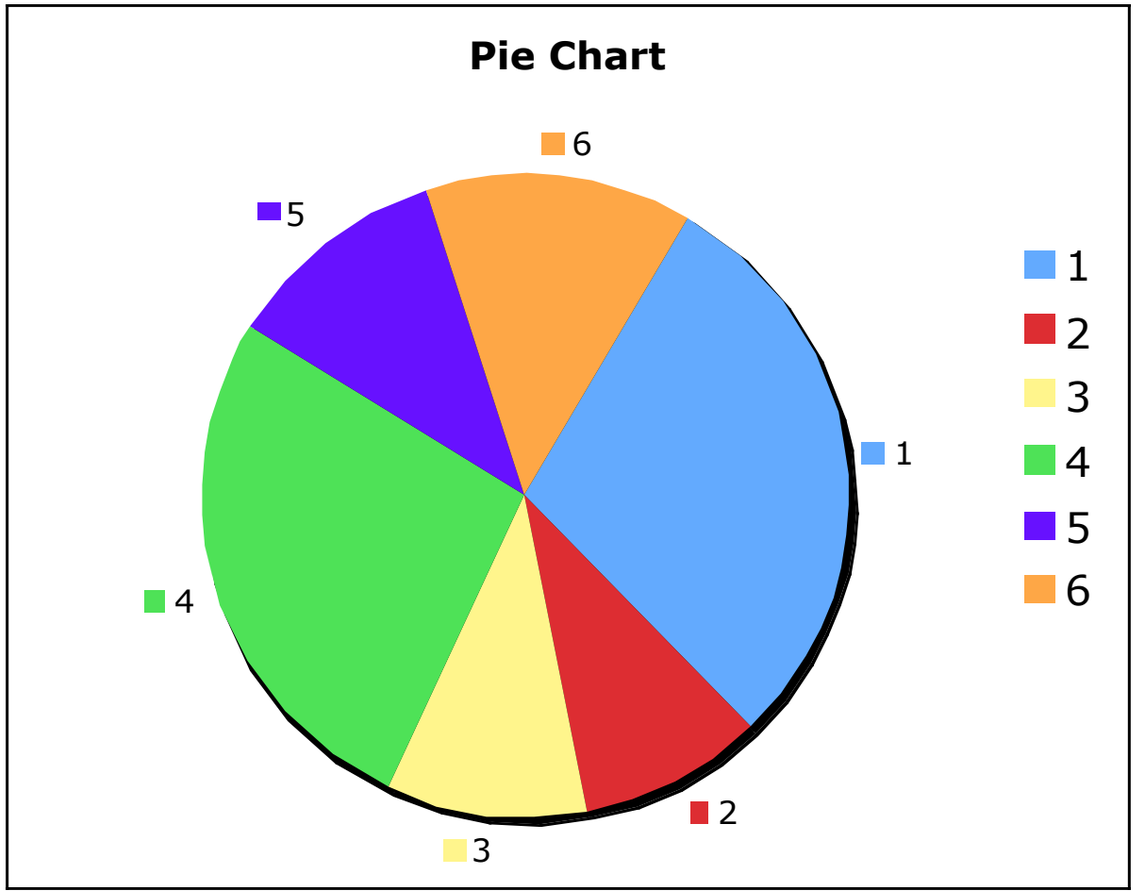
Determine the percentage for slices 1 to 6 as accurately as possible



Slice	Value
1	29
2	9
3	10
4	27
5	11
6	13

Angle comparisons

Determine the percentage for slices 1 to 6 as accurately as possible



Slice	Value
1	29
2	9
3	10
4	27
5	11
6	13

write down differences between true values and your estimates

Evaluating User Perception

Get differences between user estimates and true values

Find absolute differences

Sum all differences