Problem 1

- The audience are the readers of the newyorktimes
- The Oscar winning movies build smaller audience over time. When is the biggest grossing of the movies in a year. The duration of the movies.
- The colour: The total box office revenue. The height: the box office revenue in one week. The width: The longevity. The total amount of movies per month. You can see a trend in one year when most people go to the movies.
- Colour, height, width, area and stacked.
- You find information about each movie when you mouse over. You can also search for a movie. The temporal change of the height per movie gives information about when the movie peeks. Some movies have an early peek, some have a late peek.
- It is pretty. It contains a lot of information. But not really comprehensive because it is not a traditional graph with a Y-axis and a baseline.

Tufte's principles of graphical integrity:

- Are the scales appropriately labeled? No y-axis.
- Is the Lie factor high? To some extent: movies stacked higher appear to have greater box office revenue.

- – Does the visualization show data variation and not design variation? Only data variation, not design variation.

Tufte's visualization design principles, are they adhered to?

- Maximize the data-ink ratio. Yes, no grid lines or additional scale units.
- Avoid chart junk. Yes, no background.
- Increase data density. Yes, many movies.
- Layer information. Yes, colour, width, height and surface and time of year show complexity in data

Graphic design principles:

- How is contrast used? Yes, red is more vivid and shows highest gross revenue.
- What kind of contrast is used? Contrasting colours.

- How is repetition used? Not used, only one graph.

- How is alignment used? Not with multiple graphs but movies are stacked next to each other, which might show differences.

- How is proximity used? No proximity used.

- Which visual encodings are used? Size (surface, height, width), colours, stacking.
- Are the visual encodings appropriate? Yes, but depends on what you really want to show.

- Comment on subjective dimensions such as aesthetics, style, playfulness and vividness. Aesthetics can be used to highlight certain movies, which might manipulate the message. Also, aesthetics seem to dominate the message.

- What is the intended goal of the visualization and is that goal achieved? Difference in blockbusters and Oscar-winning movies based on box office revenue pattern.

- Are there any things you would do differently, and why? Yes, highlight Oscar-winning movies in some way that the comparison can be made.

Problem 2

Shape: maximum and minimum peaks
Position: stimulus and reward match between different graphs

- 1 experimental design
- 2 raw data: multiple trials
- 3 sum of trials
- 4 differences between conditions in size of peak

- Does the visualization achieve any of your tasks?
- Yes but does only convey information to selective scientific audience. No other explanation is offered.