

Week 5: Quiz 5

- Q1. With respect to perception, what are some of the differences between our eyes and a camera?
- 1) Our eyes are task directed
 - 2) cameras have evenly distributed pixels whereas our eyes pixel focus is concentrated;
 - 3) we have a brain which does visual processing in a hierarchical manner;
 - 4) in the brain, we get what we focus on e.g. finding a red dot;
 - 5) the brain is both bottom-up and top-down
- Q2. The smallest amount of difference between two stimuli that can be detected is called the _____.
- just noticeable difference
- Q3. The relationship between physical stimulus magnitude & their corresponding sensations is called psychophysics.
- True
- Q4. Regarding "data encoding", comment on how to display continuous data vs. discrete data on charts:
- if you have continuous data, use a continuous charting format, such as a line chart. if you have discrete data display format, such as a bar graph.
- Q5. For ordinal variable, which of the following channels is most appropriate?
- Area
- Q6. For categorical variable, which of the following channels is most appropriate?
- shape
- Q7. which one of the following is mark?
- Point
- Q8. which one of the following is channel?
- shape
- Q9. As stated by Stevens' power law:
- our perception of magnitude is a function of the original physical intensity of the stimulus.

Q10. In the equation for Stevens power law, $S = cI^b$, the letter b equals a constant, which will be different for each sensory modality.

Q11. Which statement(s) below is/are true regarding the major problems with using a rainbow colormap for showing ordered data:

- The rainbow is not perceptually linear: a box that shows two or three different discernable colors in some regions of the colormap may show only one distinguishable color in other regions (especially the large green-yellow area near the middle)
- The hue channel is not ordered. Colours such as red vs blue vs green vs purple have no intrinsic perceptual ordering.