

PSY1012
Sensation & Perception Homework

Students:

The following are the steps to complete the Sensation-Perception homework.

1. TASK 1: 40%
 - a. Create a graph with the data sent to you. Plot the mean *Perceived Brightness* against each of the five experimental conditions.
 - b. Label the x-axis as “Brightness in Lumens”
 - i. Label the tick marks appropriately
 - c. Label the y-axis as “Subjective Estimate of Brightness”
 - i. Allow Excel to determine the tick marks
2. TASK 2: 30%
 - a. Add an equation on the graph that estimates the function. Try the different equations available from Excel and choose the one that predicts the data best. Do not change the automatic settings in Excel for the parameters of the equations (e.g., only use the power 2 polynomial. Do not move up to other value polynomials).
 - i. Write in each r^2 value (4 decimal places) on the Excel data table sent to you for this homework.
 - ii. On the graph itself, show only the BEST PREDICTING equation and the r^2 value.
3. TASK 3: 30%
 - a. Under the data table you filled out in the Excel file, write between 50-100 words on how the table below and the graphed data describe your PERCEPTUAL EXPERIENCE with standard THREE WAY household lightbulbs.

Electrical power equivalents for differing lamps^{[5][6]}

Minimum light output (lumens)	Electrical power consumption (watts)		
	Incandescent (non-halogen)	Compact fluorescent	LED
200	25	3-5	3 ^[7]
450	40	9-11	5-8
800	60	13-15	8-12
1,100	75	18-20	10-16
1,600	100	24-28	14-17
2,400	150	30-52	24-30 ^[8]
3,100	200	49-75	32 ^[9]
4,000	300	75-100	40.5 ^[10]