

ASTRO 1020 Lab

L5: Hubble's Law

Grading

- All labs are scaled to be graded out of 10 points*

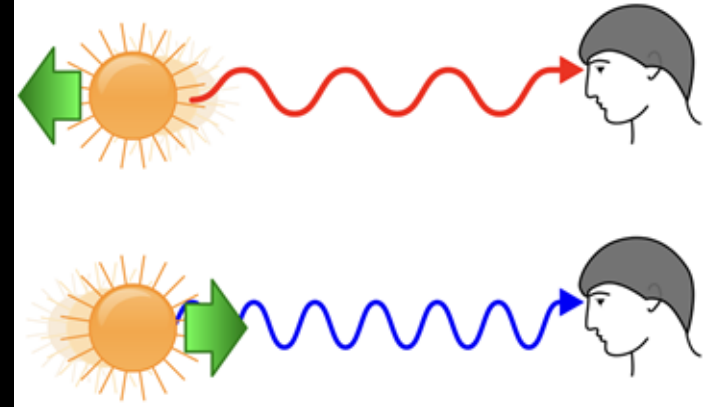
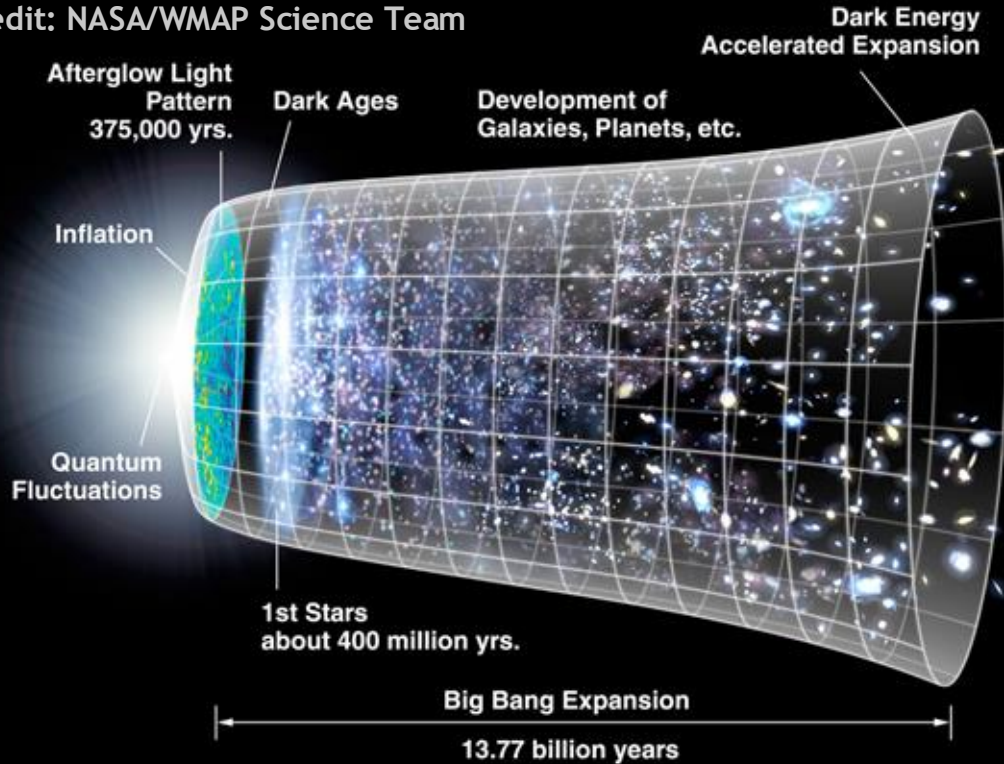
Points per question	Description
1.0	A correct answer with units and work shown. Answers that don't require work will be <u>graded on completion</u>
0.8	A correct answer without units or work shown
0.6	An incorrect answer with units and work shown
0.4	An incorrect answer without units or work shown
0.2	Some work shown without an answer
0.0	Not Attempted

Things you need to know for Lab 5

- Expanding universe
- Doppler shifts
- Scales
- Making lines of best fit

Expanding Universe & Doppler Shift

Credit: NASA/WMAP Science Team

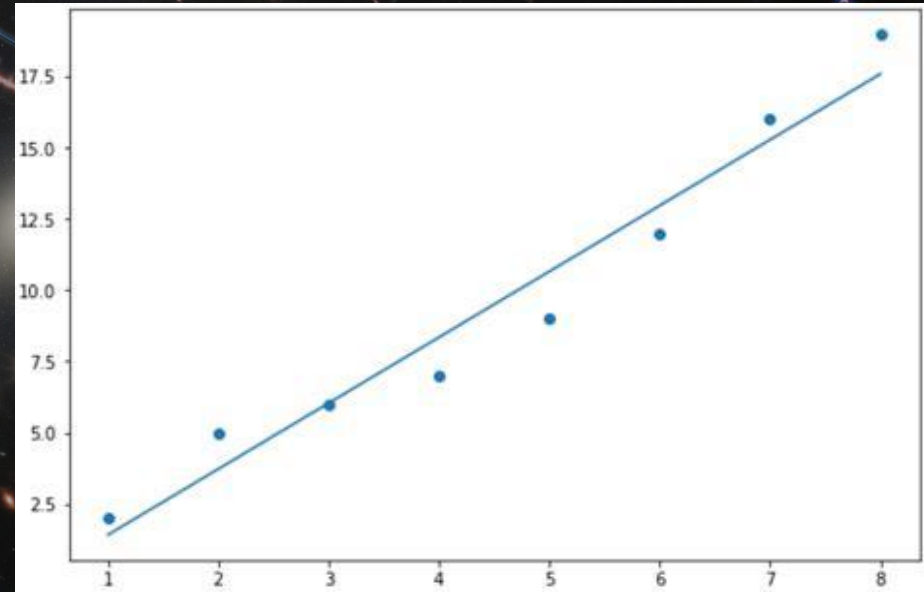
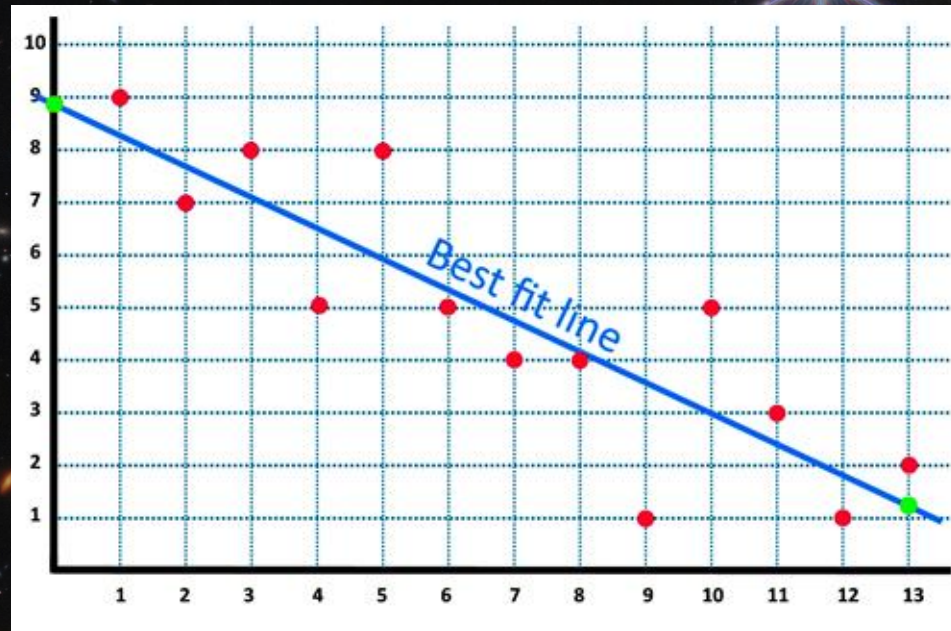


Credit: Aleš Tošovský

Reading Scales



Lines of Best Fit



Linear Equations

$$\underline{y = mx + c}$$

A deep space image of a galaxy cluster, likely the Abell 1689 cluster, showing numerous galaxies of various shapes and colors (white, blue, orange) against a dark background. The image is overlaid with a white grid pattern. The word "Questions?" is written in a large, white, sans-serif font across the center of the image.

Questions?