Systems of equations: Project

Alg2H

Requirements

- Describe a system with two equations
  - Using word problem
  - Picture
  - Poem
  - Other !
- Solution of the system
  - You will need to attach a ‘show-your-work’ on paper, scanned to submit in schoology.
- Challenge (small)
  - With solution in the attached show-your-work part.
- (extra credit) Special cases.
- Presentation in class – 4 to 5 minutes.
- Work in pairs (or individual),presenting in a week.

You WILL need to submit your work.

- Solving the equations.
- Checking your results (plugging in).

- Each person in the team submits a self-written version of ‘show your work’, and (the same) copy of the slides.
  - Slides in Powerpoint format or PDF.
  - NO links to google-drive etc.

- Submit on schoology BEFORE the presentation in class:
  - Presentation file.
  - Show-your-work.

Extra credit: Special cases

- Demonstrate briefly one of the special cases, preferably related to the problem you phrased:
  - Parallel lines – No solution.

  OR
  - Same line – infinite number of solutions.

- Need to be in the presentation (short, one slide) and in the show-your-work (in detail).

1-Point perspective

Alg2H: (Sample) Systems of Equations project

John Smith and Jane Doe

Oct-26-2016

Phrasing the problem 1-point perspective

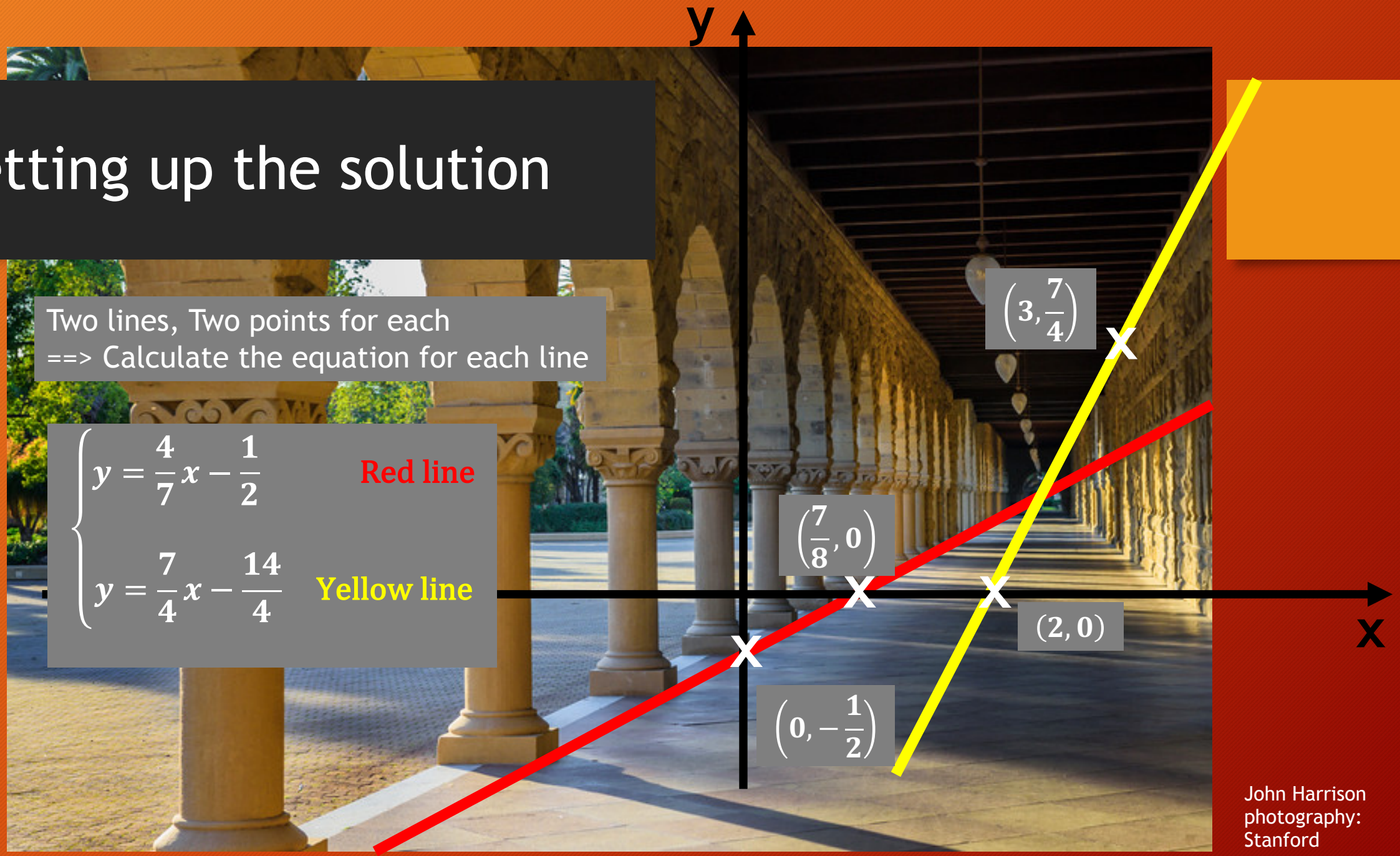
What is the location of the 1-point perspective?

John Harrison photography: Stanford

Setting up the solution

Two lines, Two points for each
==> Calculate the equation for each line

$$\begin{cases} y = \frac{4}{7}x - \frac{1}{2} & \text{Red line} \\ y = \frac{7}{4}x - \frac{14}{4} & \text{Yellow line} \end{cases}$$



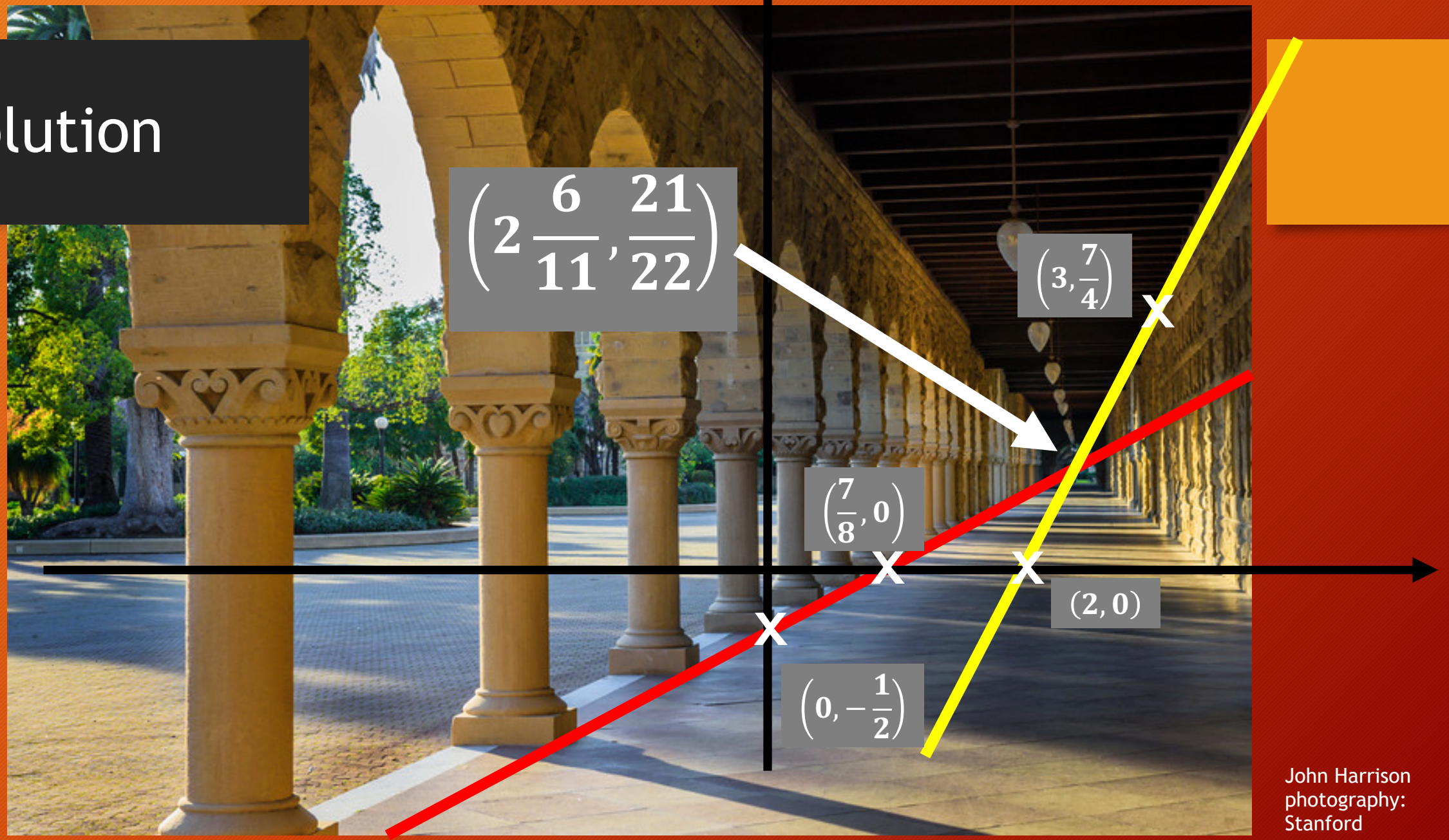
John Harrison
photography:
Stanford

System of equations

$$\begin{cases} y = \frac{4}{7}x - \frac{1}{2} & \text{Red line} \\ y = \frac{7}{4}x - \frac{14}{4} & \text{Yellow line} \end{cases}$$

Solution $(x, y) = \left(2\frac{6}{11}, \frac{21}{22}\right)$

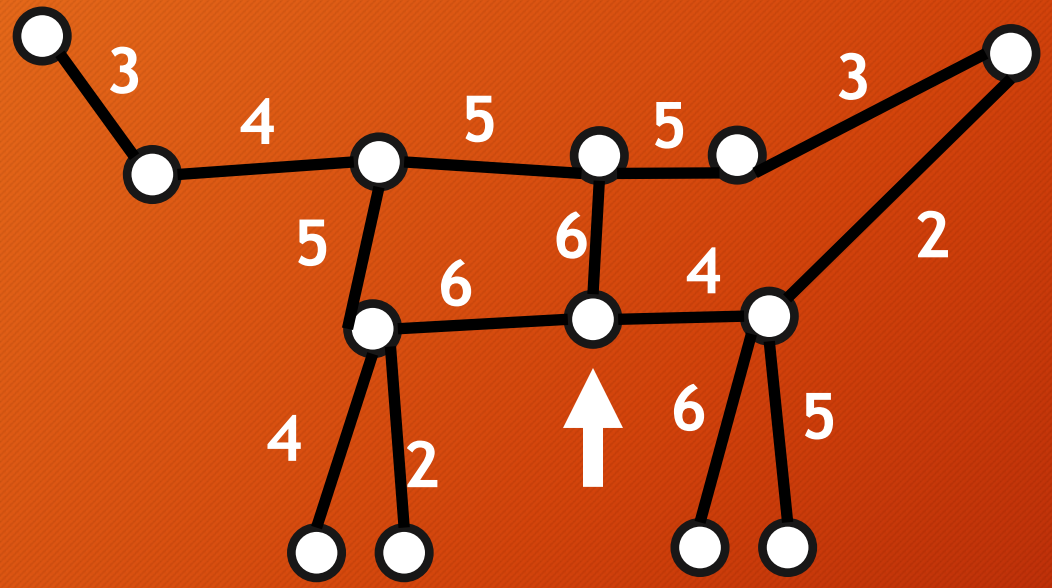
Solution



John Harrison photography: Stanford

Challenge (small)

Behind each node a mystery number is hidden. The edges describe the sum of the two adjacent mystery numbers.
Find the mystery number behind the node marked with an arrow.



Extra credit: Parallel lines

You can add the solution here, or any other indicative detail.

John Harrison photography: Stanford

End

(Almost: Rubric to come)

Rubric: 20 points (+2 extra credit)

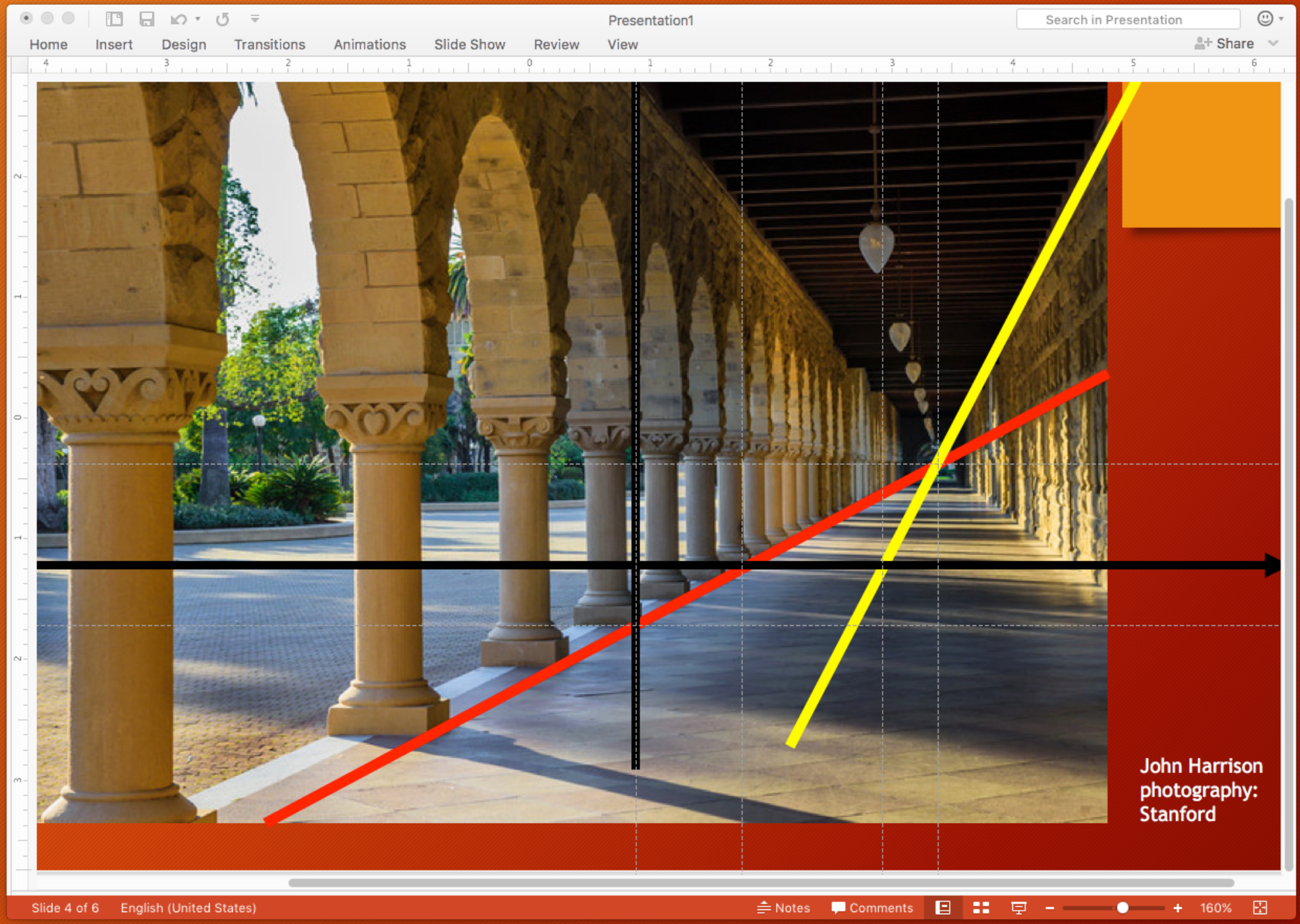
	Included in	Points	Needs work	Meets expectation	Exceeds expectation
Stating the problem	Presentation	4	Not clear. Doesn't make real-world sense.		Clear. Leads directly to system of equations.
Solving the problem	(In the show-your-work)	8	Inaccurate. No checking of results.	Accurate. Used one method.	Used two methods (Graphic, Algebraic).
Presenting	Presentation / in-class (4 to 5 minutes)	4	Too short/ Too long. Contains inaccuracies.		On time. Clear and concise and correct.
Challenge problem	Presentation +show-your-work	4	Small variation off. Not engaging.		Original. Interesting.
Extra credit: Demonstrate related special case	Presentation +show-your-work	2	Inaccurate. No checking of results.	Accurate. Used two methods.	Used two methods (Graphic, Algebraic).

End

(Backup slides: How I measured+options)

Phrasing the problem
1-point perspective

John Harrison photography: Stanford


Presentation1
Search in Presentation
Home
Insert
Design
Transitions
Animations
Slide Show
Review
View
Share
John Harrison
photography:
Stanford
Slide 4 of 6
English (United States)
Notes
Comments
160%