

Rates vs Totals

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Summary	Students compare points on an hours/pay Cartesian space. The main challenge lies in recognizing that, although one student <u>earned more</u> , the other student <u>was paid better</u> , that is, at a higher rate of pay. They must indicate the difference in pay and the differences in amount worked.
Goals	1. Students will articulate the connections between differences in values and intervals along dimensions. 2. Students will be able to talk about relative pay.
Materials	Overheads, Handouts
Keywords	Compare/Contrast Functions Contextualized Situations Coordinate Pairs Full Class Discussion Interpretation of Graphs Linear Functions Production of Graphs Small Group Work

Activity Plan:

1. Who Was Paid Better?: Comparing Two People's Work and Pay [Whole Class]

Show the overhead on Page 1. Refer to the ordinate (x axis) as the **hours (number) line**. Refer to the abscissa (y axis) as the **pay (number) line**.

Show two points in the Cartesian space:

Lisette: (1h, \$3.00)

Dayshawn: (3h, \$6.00)

Ask:

Who got paid better?

Who earns more for each hour of work?

Register students' initial votes on the blackboard.

Then engage them in a discussion in which they justify their views. Try to have them articulate their views by providing a justification of a visual or numerical sort.

Focus on the visual differences (run versus raise).

2. Explaining Who Is Better Paid [Group Work]

Ask the students to work in groups of 3 (or so) to plot other values on the handout on Page 2.

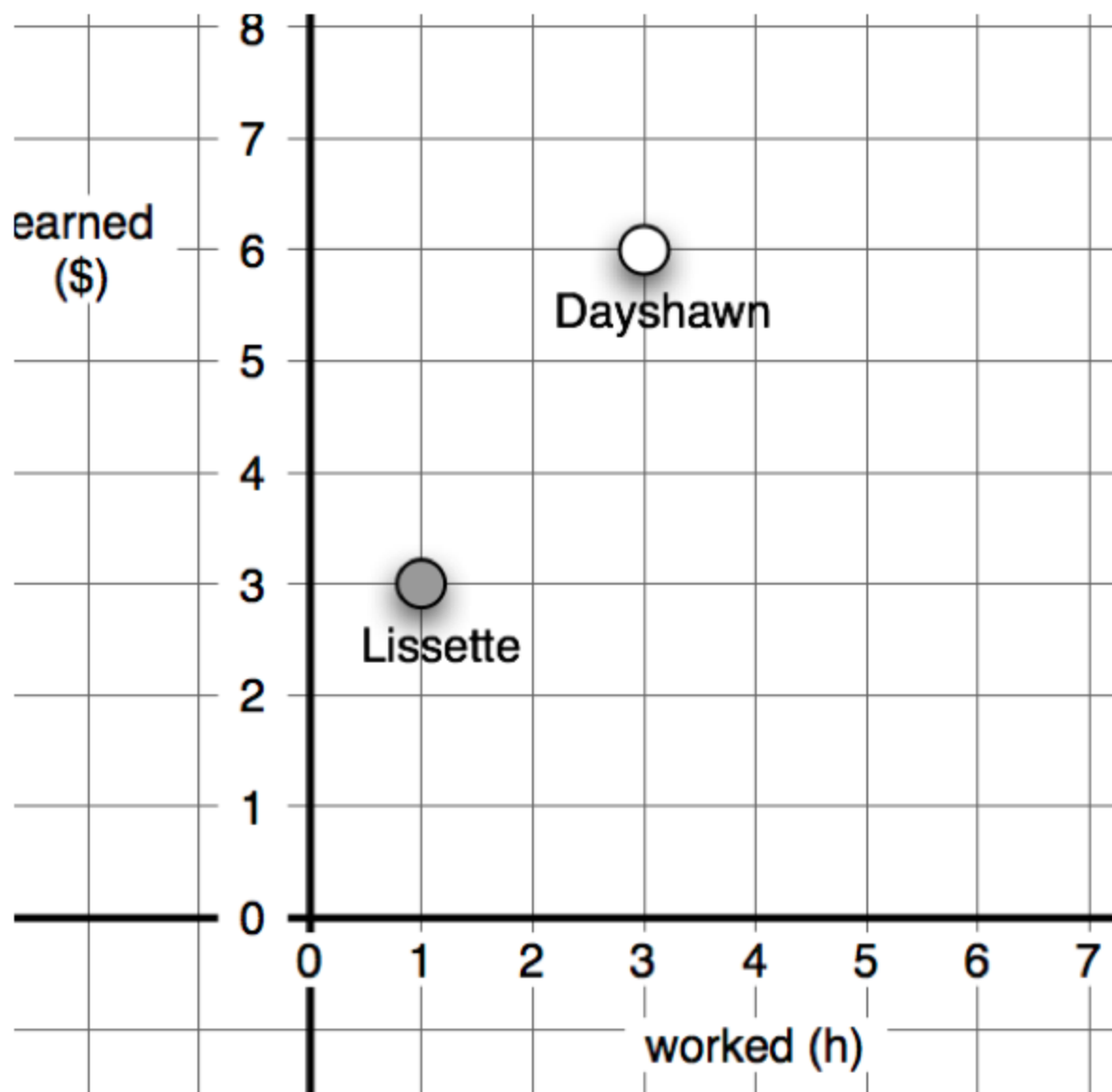
Ask them to discuss and determine which people received the same rate of pay and to draw the graphs showing this.

3. Explaining Who Is Better Paid [Whole Class]

The students present and defend their answers

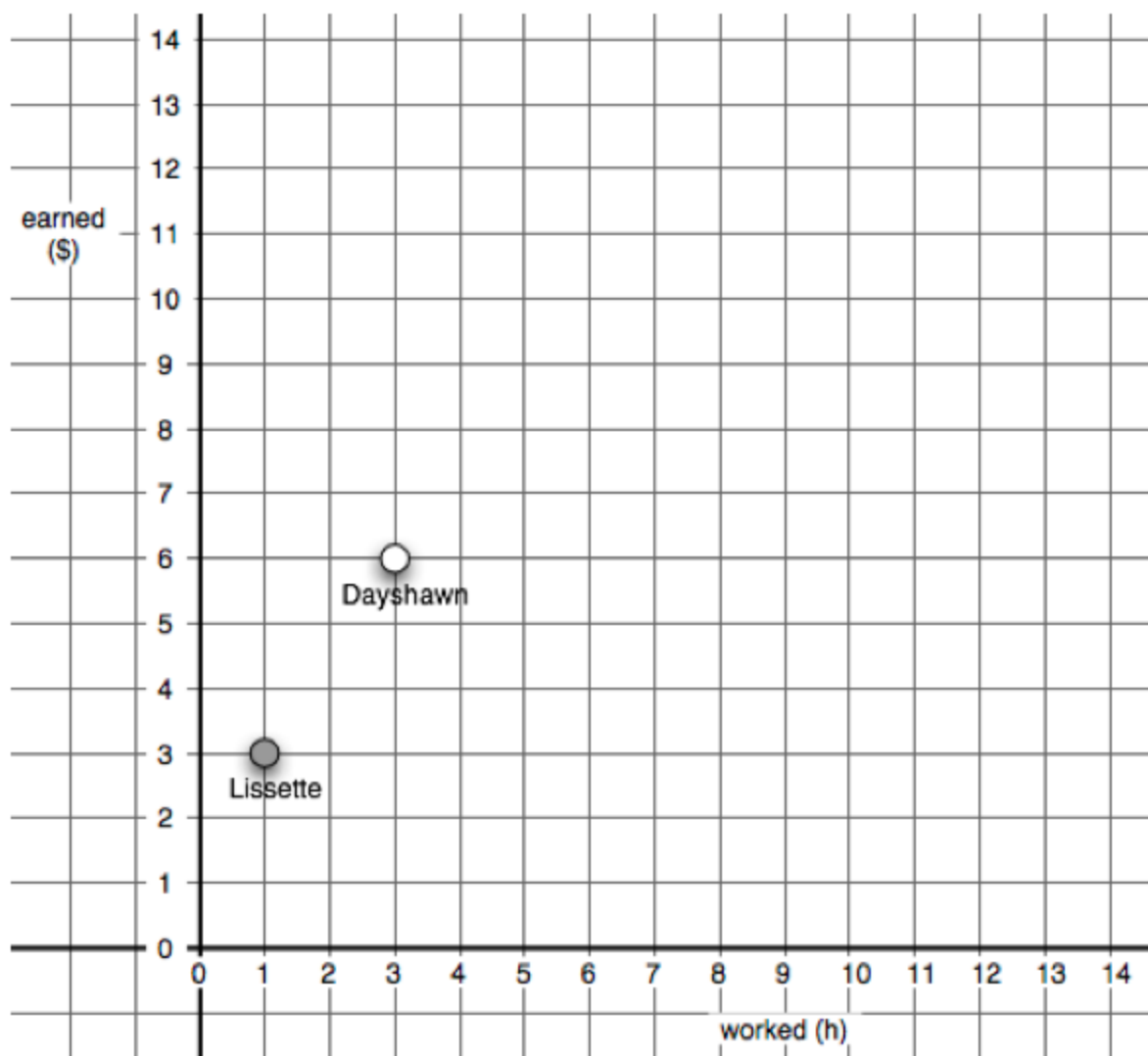
4. Homework: Who Is Better Paid? (Page 3)

The homework is similar to the classroom work.



Overhead and Handout: Comparing Ratios

Name: _____ Date: _____



Show (as points on the graph):

Erica: (4h, \$12.00)

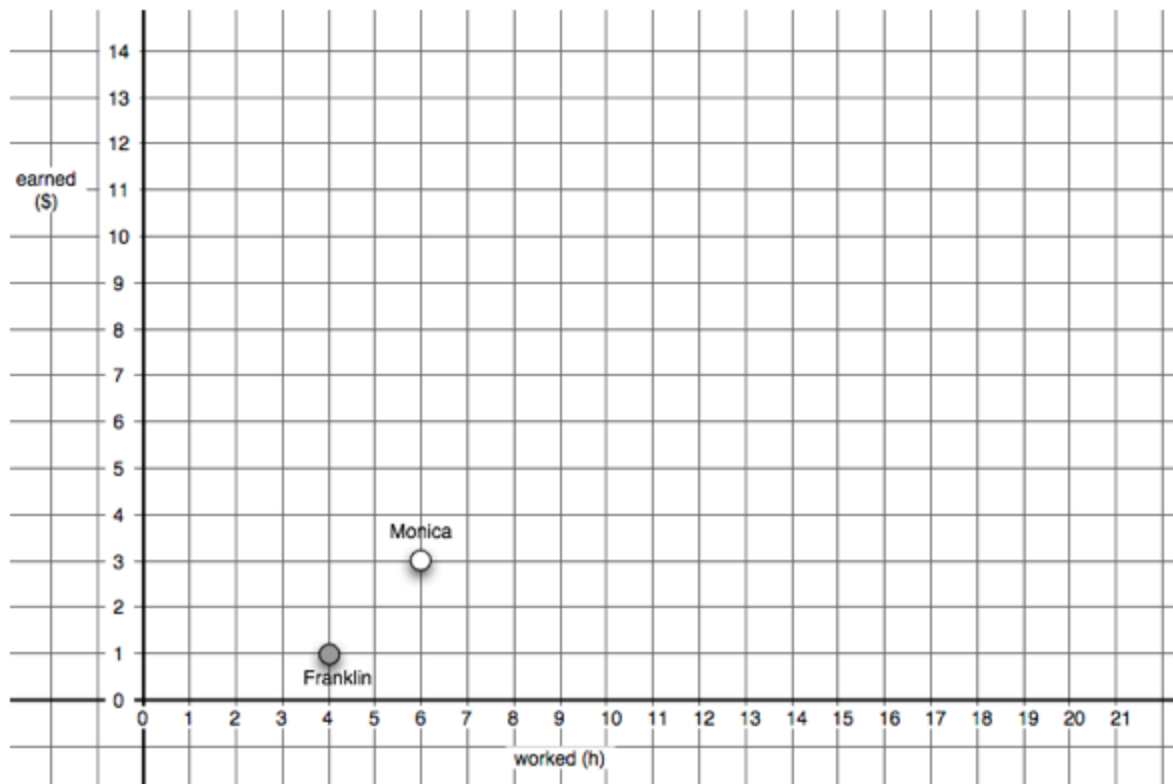
Joshua: (6h, \$12.00)

Did any people receive the same amount of money per hour? Who?

Draw lines to show who received the same amount of money per hour.

Name: _____ Date: _____

Study the diagram below.



How much did Franklin make per hour of work?

John and Mary each make exactly as much money per hour as Franklin. But they worked a different number of hours than Franklin.

Place and label two points on the graph: one point for John, another point for Mary.

How much did Monica make per hour of work?

Sam and Gina each make exactly as much money per hour as Monica. But they worked a different number of hours than Monica.

Place and label two points on the graph: one point for Sam, another point for Gina.