

8.EE Who Has the Best Job?

Task

Kell works at an after-school program at an elementary school. The table below shows how much money he earned every day last week.

Time worked	1.5 hours	2.5 hours	4 hours
Money earned	\$12.60	\$21.00	\$33.60

Mariko has a job mowing lawns that pays \$7 per hour.

- Who would make more money for working 10 hours? Explain or show work.
- Draw a graph that represents y , the amount of money Kell would make for working x hours, assuming he made the same hourly rate he was making last week.
- Using the same coordinate axes, draw a graph that represents y , the amount of money Mariko would make for working x hours.
- How can you see who makes more per hour just by looking at the graphs? Explain.

Solution

a. Mariko would make $7 \times 10 = 70$ dollars for working 10 hours. Kell's hourly rate can be found by dividing the money earned by the hours worked each day.

Time worked	1.5 hours	2.5 hours	4 hours
Money earned	\$12.60	\$21.00	\$33.60
Pay rate	\$8.40 per hour	\$8.40 per hour	\$8.40 per hour

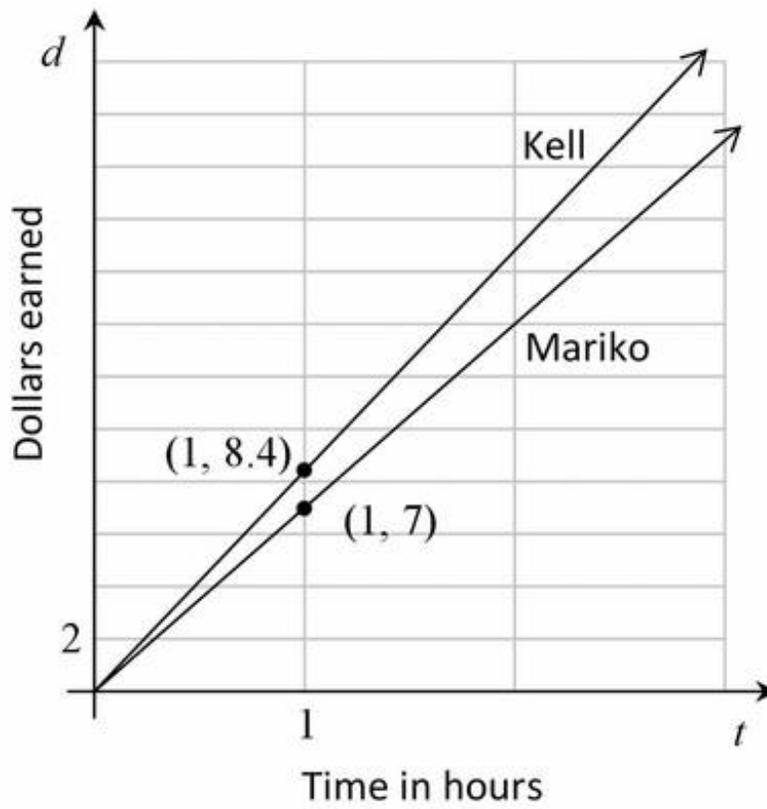
If Kell works for 10 hours at this same rate, he will earn $8.4 \times 10 = 84$ dollars. So Kell will earn more money for working 10 hours.

Alternatively, we could reason proportionally without computing the unit rate. Since Mariko earned \$21.00 for 2.5 hours, she will earn four times as much for working four times as long ($10 = 4 \times 2.5$), for a total of $4 \times \$21 = \84 .

b. See the figure below.

c. See the figure below.

d. You can see that Kell will make more per hour if you look at the points on the graph where $x = 1$ since this will tell you how much money each person will make for working 1 hour. You can also compare the slopes of the two graphs, which are equal to the hourly rates. See the figure below.



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