Unit 2 Lesson 9: Navigating a Table of Equivalent Ratios

1 Number Talk: Multiplying by a Unit Fraction (Warm up)

Student Task Statement

Find the product mentally.

$\frac{1}{3} \cdot 21$

$\frac{1}{6} \cdot 21$

$(5.6) \cdot \frac{1}{8}$

$\frac{1}{4} \cdot (5.6)$

2 Comparing Taco Prices

Student Task Statement

number of tacos	price in dollars

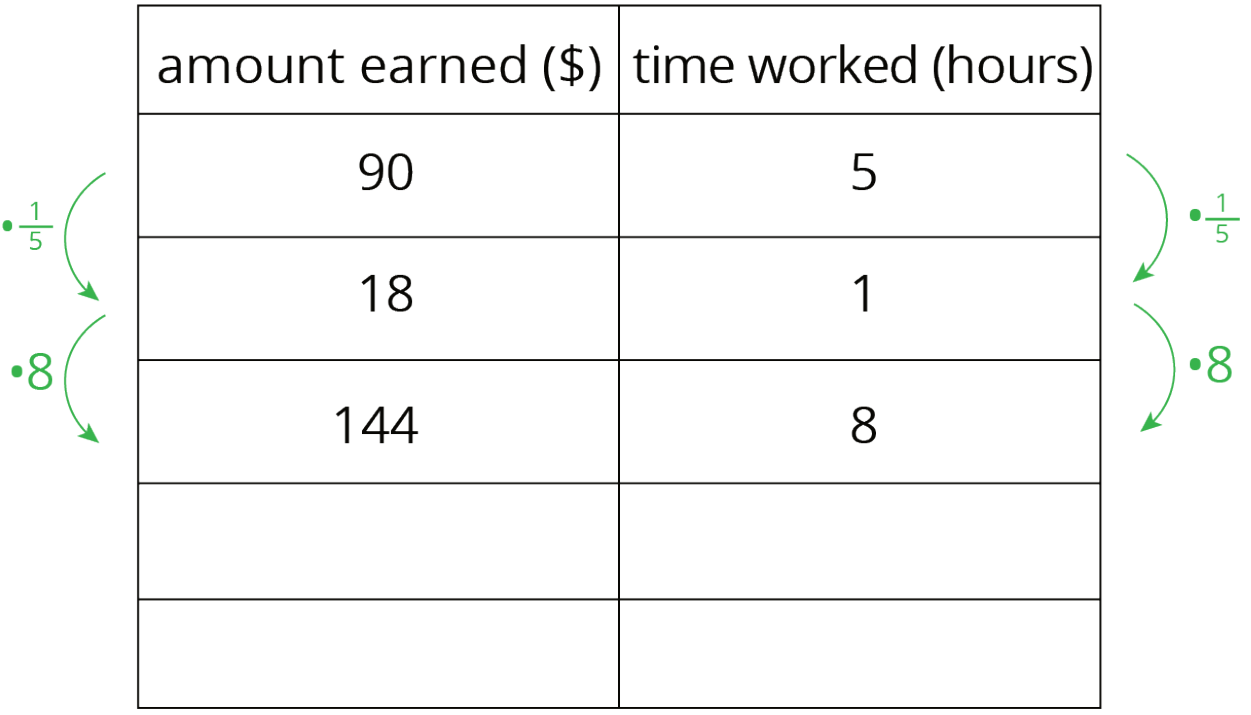
Use the table to help you solve these problems. Explain or show your reasoning.

1. Noah bought 4 tacos and paid $6. At this rate, how many tacos could he buy for $15?
2. Jada's family bought 50 tacos for a party and paid $72. Were Jada's tacos the same price as Noah's tacos?

3 Hourly Wages

Student Task Statement

Lin is paid $90 for 5 hours of work. She used the table to calculate how much she would be paid at this rate for 8 hours of work.



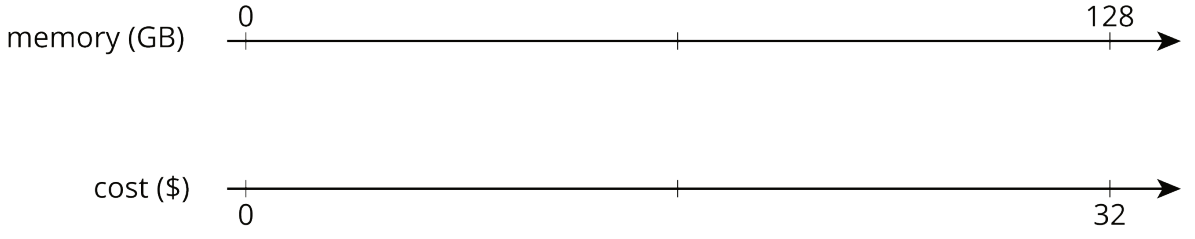
1. What is the meaning of the 18 that appears in the table?
2. Why was the number $\frac{1}{5}$ used as a multiplier?
3. Explain how Lin used this table to solve the problem.
4. At this rate, how much would Lin be paid for 3 hours of work? For 2.1 hours of work?

4 Zeno's Memory Card (Optional)

Student Task Statement

In 2016, 128 gigabytes (GB) of portable computer memory cost $32.

1. Here is a double number line that represents the situation:



   One set of tick marks has already been drawn to show the result of multiplying 128 and 32 each by $\frac{1}{2}$. Label the amount of memory and the cost for these tick marks.

   Next, keep multiplying by $\frac{1}{2}$ and drawing and labeling new tick marks, until you can no longer clearly label each new tick mark with a number.

2. Here is a table that represents the situation. Find the cost of 1 gigabyte. You can use as many rows as you need.

memory (gigabytes)	cost (dollars)
128	32

3. Did you prefer the double number line or the table for solving this problem? Why?