Wednesday

11/14

Unit 2, Lesson 15: Part-Part-Whole Ratios

1. Here is a tape diagram representing the ratio of red paint to yellow paint in a mixture of orange paint.

   a. What is the ratio of yellow paint to red paint? **2:3 or 6:9**

   cups of red paint | 3 | 3 | 3 |

   cups of yellow paint | 3 | 3 |

   b. How many total cups of orange paint will this mixture yield?

   15 cups

Y	R	O
2	3	5
6	9	(15)

   /2

2. At the kennel, the ratio of cats to dogs is 4 : 5. There are 27 animals in all. Here is a tape diagram representing this ratio.

   4 number of cats   [ ][ ][ ][ ]

   5 number of dogs   [ ][ ][ ][ ][ ]

C	D	Total
4	5	9	×3
12	15	27

   a. What is the value of each small rectangle? **3**

   b. How many dogs are at the kennel? **15 dogs**

   12 cats

   c. How many cats are at the kennel?

   /3

3. Last month, there were 4 sunny days for every rainy day. If there were 30 days in the month, how many days were rainy? Explain your reasoning. If you get stuck, consider using a tape diagram.

   /1

4. Noah entered a 100-mile bike race. He knows he can ride 32 miles in 160 minutes. At this rate, how long will it take him to finish the race? Use each table to find the answer. Next, explain which table you think works better in finding the answer. **(Next Page)**

S	R	Total
4	1	5	×6
24	6	30

   4:1:5 is the part, part, whole
   I had to multiply 5 by 6
   to get up to 30 days, so
   when I multiply sunny
   and rainy by 6 I get
   24 sunny and 6 rainy. **3**

Wednesday

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Table A: *Pretty quick to find unit rate and multiply up* ☺

distance (miles)	elapsed time (minutes)
32	160
1 *unit rate*	5
100	500

×32, ×¹⁄₃₂, ×100 (annotations on distance); ÷32, ×¹⁄₃₂, ×100 (annotations on time)

Table B: *Not too bad. I wouldn't have included 96 miles.?*

distance (miles)	elapsed time (minutes)
32	160
96	480
4	20
100	500

×3, ÷8, ×25 (annotations on distance); ×3, ÷8, ×25 (annotations on time)

(from Unit 2, Lesson 12)   /2

5. A cashier worked an 8-hour day, and earned $58.00. The double number line shows the amount she earned for working different numbers of hours. For each question, explain your reasoning.

wages earned (dollars)   0   14.5   29   43.5   58

time worked (hours)   0   2   3   4   6   8
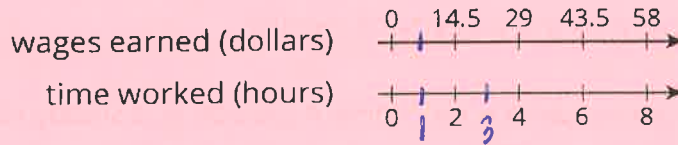
a. How much does the cashier earn per hour?   *halfway between 0 & 14.5 is $7.25*

b. How much does the cashier earn if she works 3 hours?
either (3)(7.25)=21.75 or add 14.5 + 7.25 = 21.75   (2 hr) (1 hr) /2

(from Unit 2, Lesson 13)

6. A grocery store sells bags of oranges in two different sizes.

o The 3-pound bags of oranges cost $4.
o The 8-pound bags of oranges for $9. *cheaper*

Which oranges cost less per pound? Explain or show your reasoning.
(from Unit 2, Lesson 10)

could find for same number of oranges 24 is a common multiple. OR find unit rate /1

O	$
3	$4
24	$32
1	1.33

×8

O	$
8	$9
24	$27
1	1.125

×3

Total /11

4²