## Unit 3 Lesson 7: Equivalent Ratios Have the Same Unit Rates

### 1 Which One Doesn’t Belong: Comparing Speeds (Warm up)

#### Student Task Statement

Which one doesn’t belong? Be prepared to explain your reasoning.

5 miles in 15 minutes

3 minutes per mile

20 miles per hour

32 kilometers per hour

### 2 Price of Burritos

#### Student Task Statement

1. Two burritos cost $14. Complete the table to show the cost for 4, 5, and 10 burritos at that rate. Next, find the cost for a single burrito in each case.

| * number of burritos
 | * cost in dollars
 | * unit price(dollars per burrito)
 |
| --- | --- | --- |
| * 2
 | * 14
 |  |
| * 4
 |  |  |
| * 5
 |  |  |
| * 10
 |  |  |
| * $b$
 |  |  |

1. What do you notice about the values in this table?
2. Noah bought $b$ burritos and paid $c$ dollars. Lin bought twice as many burritos as Noah and paid twice the cost he did. How much did Lin pay per burrito?

|  | * number of burritos
 | * cost in dollars
 | * unit price(dollars per burrito)
 |
| --- | --- | --- | --- |
| * Noah
 | * $b$
 | * $c$
 | * $\frac{c}{b}$
 |
| * Lin
 | * $2⋅b$
 | * $2⋅c$
 |  |

1. Explain why, if you can buy $b$ burritos for $c$ dollars, or buy $2⋅b$ burritos for $2⋅c$ dollars, the cost per item is the same in either case.

#### Activity Synthesis



### 3 Making Bracelets

#### Student Task Statement

1. Complete the table. Then, explain the strategy you used to do so.

| * time in hours
 | * number of bracelets
 | * speed (bracelets per hour)
 |
| --- | --- | --- |
| * 2
 |  | * 6
 |
| * 5
 |  | * 6
 |
| * 7
 |  | * 6
 |
|  | * 66
 | * 6
 |
|  | * 100
 | * 6
 |

* 
1. Here is a partially filled table from an earlier activity. Use the same strategy you used for the bracelet problem to complete this table.

| * number ofburritos
 | * cost indollars
 | * unit price(dollars per burrito)
 |
| --- | --- | --- |
|  | * 14
 | * 7
 |
|  | * 28
 | * 7
 |
| * 5
 |  | * 7
 |
| * 10
 |  | * 7
 |

1. Next, compare your results with those in the first table in the previous activity. Do they match? Explain why or why not.

### 4 How Much Applesauce? (Optional)

#### Student Task Statement

It takes 4 pounds of apples to make 6 cups of applesauce.

1. At this rate, how much applesauce can you make with:
	1. 7 pounds of apples?
	2. 10 pounds of apples?
2. How many pounds of apples would you need to make:
	1. 9 cups of applesauce?
	2. 20 cups of applesauce?

| pounds ofapples | cups ofapplesauce |
| --- | --- |
| 4 | 6 |
| 7 |  |
| 10 |  |
|  | 9 |
|  | 20 |



© CC BY Open Up Resources. Adaptations CC BY IM.