Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**CFS for top quality work**

* + Problem is **annotated** for units being compared
	+ Initial rate is written
	+ Rate is **divided by a fraction equaling 1**
	+ Unit rate is **described** in the context of the problem

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

UNIT 5 LESSON 1

**AIM**: SWBAT compute unit rates associated with quantities in different units

**THINK ABOUT IT!**

Mr. Roble is travelling to the store and drives 4 miles in 16 minutes. Write a unit rate that describes Mr. Roble’s trip to the store.

Test the Conjecture #1) Write two different unit rates that can represent 10 pineapples costing $20.

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Test the Conjecture #2) Mary runs in the Chicago marathon and it takes her 5 hours to complete it. Write a unit rate that could describe Mary’s run if a marathon is 26.2 miles long.

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Conjecture

|  |
| --- |
| Any \_\_\_\_\_\_\_\_\_ can be written as two different \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_.  |

**PARTNER PRACTICE**

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| *Bachelor Level* |

1. Thomas walks 10 miles in 120 minutes. Select all of the unit rates below that describe Thomas’ walk.

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a) He can walk 1 mile in 12 minutes

b) He can walk 12 miles in 1 minute

c) He can walk $\frac{1}{12}$ of a mile in 1 minute

d) It takes him $\frac{1}{12}$ of a minute to walk 1 mile

1. A 24 ounce soda cost $1.75. How much does it cost per ounce? Round to the nearest cent.

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| *Master Level* |

1. Kerel wants to buy a Points card for his X-box live account. He can buy a 200 point card for $10.00 or a 300 point card for $15.00. Which card is the better value?
2. Explain how you used unit rates to determine your answer to question 3.

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**INDEPENDENT PRACTICE**

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| *Bachelor Level* |

1. Zion reads 120 pages in 4 hours. Determine whether each unit rate below represents this rate. Select “Yes” or “No.”

**CFS for top quality work**

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	+ Unit rate is **described** in the context of the problem

|  |  |  |
| --- | --- | --- |
| Unit Rate | Yes | No |
| $$\frac{30 pages}{1 hour}$$ |  |  |
| $$\frac{30 hours}{1 page}$$ |  |  |
| $$\frac{\frac{1}{30}pages}{1 hour}$$ |  |  |
| $$\frac{\frac{1}{30}hours}{1 page}$$ |  |  |

1. Ms. Thomas went to Safeway on Monday and bought 2 pounds or oranges for $5.50. What is the unit price, to the nearest cent?

**CFS for top quality work**

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|  |
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| *Master Level* |

1. Mr. Rowley has 16 homework papers and 14 exit tickets to return. Ms. Rivera has 64 homework papers and 60 exit tickets to return. For each teacher, write a ratio to represent the number of homework papers to number of exit tickets they have to return. Are the ratios equivalent? Explain.

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1. At Fine Fare, 2 pounds of chicken cost $10.90. Find the cost of 5 pounds of chicken at the same unit price.
2. Jonathan’s parents told him that for every 5 hours of homework or reading he completes, he would be able to play 3 hours of video games. His friend Lucas’s parents told their son that he could play 30 minutes for every hour of homework or reading time he completes. If both boys spend the same amount of time on homework and reading this week, which boy gets more time playing video games? How do you know?

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1. Of the 30 girls who tried out for the lacrosse team at Euclid Middle School, 12 were selected. Of the 40 boys who tried out, 16 were selected. Which statements below are true? Select all that apply.

a) For every 5 girls who tried out, 2 were selected

b) For every 20 boys who tried out, 8 were selected

c) The ratio of students who tried out to students who were selected was higher for boys than girls

d) The ratio of students who tried out to students who were selected was the same for boys and girls

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| --- |
| *PhD Level* |

1. Use the picture below to solve each step.

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Step A: Which is the better deal? Explain why/how you know.

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Step B: How much money would you save if you went with the better deal to buy 24 sodas?

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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**EXIT TICKET**

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| Self-assessment | I mastered the learning objective today. | I am almost there.  | Need more practice and feedback. |
| Teacher feedback | You mastered the learning objective today. | You are almost there.  | You need more practice and feedback. |

1. Jenny’s Gift Shop sells candles in a variety of packages. The cost per candle is the same in every package. A package of 8 candles costs $12.96. What is the cost per candle?

**Show your work.**

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Marcus ran in a race over the weekend and ran 4 kilometers in 20 minutes. Choose all of the unit rates below that represent the problem. For each unit rate you choose, explain it in the context of the problem.

a. 1 km in 5 min \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b. 5 km in 1 min \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c. $\frac{4}{20} $km in 1 min \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

d. $\frac{4}{20}$min in 1 km \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

e. $\frac{1}{5}$km in 1 min\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_