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

UNIT 5 LESSON 1

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| AIM: | SWBAT apply ratios |

**THINK ABOUT IT!**

Sam can hike 1.5 miles every ½ hour. If he hikes at a constant speed, how far can he hike in 4 hours? Explain how you solved the problem.

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Key Point

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| We can solve real world problems that involve a \_\_\_\_\_\_\_\_\_\_\_\_\_\_ relationship between two quantities with ratio \_\_\_\_\_\_\_\_\_ and double \_\_\_\_\_\_\_\_\_\_\_ diagrams. |

**Interaction with New Material**

Ex.1) Katz Deli in Manhattan keeps track of the amount of meat it sells each day to help them make purchasing decisions. On Monday, Katz sold 1.5 pounds of pastrami for every 0.5 pound of corn beef it sold. On Tuesday, they sold 1.25 pounds of pastrami for every 0.75 pound of corn beef it sold. If Katz sold 20 pounds of meat on Monday and 24 pounds of meat on Tuesday, how many total pounds of corn beef did they sell on Monday and Tuesday?

**PARTNER PRACTICE**

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| *Bachelor Level* |

1. A local grocery story has strawberries on sale for $1.45 per pound. How much would it cost to buy 5.5 pounds of strawberries? Round your answer to the nearest penny.

* CFS for top quality work
  + Annotations: starting rate, total
  + Ratio table/model drawn and labeled
  + Equivalent ratios identified
  + Answer statement is box

1. Josie and her brother, Sean, both have a job after school. For every $7.50 that Josie earns, her brother earns $5.50. On Tuesday, they earned a total of $39.00. Read each statement below and decide whether it is “True” or “False”.

* CFS for top quality work
  + Annotations: starting rate, total
  + Ratio table/model drawn and labeled
  + Equivalent ratios identified
  + Answer statement is box

|  |  |  |
| --- | --- | --- |
| Statement | True | False |
| Josie earned $22.50 on Tuesday |  |  |
| Sean earned $28.20 on Tuesday |  |  |
| To solve this problem, you can apply a scale factor of 3 |  |  |
| Sean earned $16.50 on Tuesday |  |  |

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| *Master Level* |

1. Josie takes 2 minutes to finish ¾ of an apple. Sally takes 3 minutes to finish 1.5 apples. Josie and Sally are having a competition to see who can finish 12 apples faster. They eat their apples at a constant rate.

Jeremiah says that Josie eats at a faster rate because 2 minutes is less than 3 minutes. Do you agree or disagree? Explain.

* CFS for top quality work
  + Annotations: starting rate, total
  + Ratio table/model drawn and labeled
  + Equivalent ratios identified
  + Answer statement is box

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**INDEPENDENT PRACTICE**

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| *Bachelor Level* |

1. Mr. Solomon can run 2miles in 2 hours. How many miles can he run in 6 hours?

* CFS for top quality work
  + Annotations: starting rate, total
  + Ratio table/model drawn and labeled
  + Equivalent ratios identified
  + Answer statement is box

1. A fruit stand sells a watermelon for $0.50 per pound. A local store sells watermelon for $0.75 per two pounds. You want to buy 8 pounds of watermelon. Read each statement below and decide whether it is “True” or “False.”

* CFS for top quality work
  + Annotations: starting rate, total
  + Ratio table/model drawn and labeled
  + Equivalent ratios identified
  + Answer statement is box

|  |  |  |
| --- | --- | --- |
| Statement | True | False |
| 8 pounds of watermelon will cost $4 at the fruit stand |  |  |
| 8 pounds of watermelon will cost $6 at the local store |  |  |
| It will be $2 cheaper to buy watermelon at the fruit stand |  |  |
| It will be $1 cheaper to buy watermelon at the local store |  |  |

1. Each week, Lauren and Erin compete to see who can exercise the most. Last week, for every 0.6 hour Lauren exercised, Erin exercised 0.5 hour. If Erin exercised a total of 3 hours last week, how much total time did the two women exercise last week?

* CFS for top quality work
  + Annotations: starting rate, total
  + Ratio table/model drawn and labeled
  + Equivalent ratios identified
  + Answer statement is box
  1. 3.6 hours
  2. 6 hours
  3. 6.6 hours
  4. 7.7 hours

|  |
| --- |
| *Master Level* |

1. Andrew can mow 8 lawns in 2 hours. Select all the statements below that are true.

* CFS for top quality work
  + Annotations: starting rate, total
  + Ratio table/model drawn and labeled
  + Equivalent ratios identified
  + Answer statement is box
  1. Andrew can mow 16 lawns in hours
  2. Andrew can mow 24 lawns in 6hours
  3. Andrew can mow 32 lawns in hours
  4. Andrew can mow 48 lawns in 14 hours

1. Ashley went to two stores to buy gum. At the first store, they charge $1.50 for three packs of gum. At the second store, they charge $1.20 for two packs of gum. If she spends $6 on gum at each store, how many more packs of gum will she get from the first store than the second store?

* CFS for top quality work
  + Annotations: starting rate, total
  + Ratio table/model drawn and labeled
  + Equivalent ratios identified
  + Answer statement is box

6) A store charges $3.50 for every 2 pounds of Gala apples.

* CFS for top quality work
  + Annotations: starting rate, total
  + Ratio table/model drawn and labeled
  + Equivalent ratios identified
  + Answer statement is box

Part A: Write an expression that you could use to determine the cost of *n* Gala apples.

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Part B: Determine the cost of 16 pounds of Gala apples

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Part C: If you spend $21 on Gala apples, how many pounds did you buy?

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| *PhD Level* |

7) A company paid $48 for 2 cases of printer paper. Each case contained 12 packages of paper. Next month the company’s office manager needs to order 180 packages of the same paper. If the price per package does not change, what would be the total cost of next month’s order?

* 1. $90
  2. $360
  3. $720
  4. $1,140

8) Allison is saving to buy a $500 bicycle by working during summer vacation.

* + The job pays her $8 for every 1 hour worked.
  + Allison works exactly 20 hours each week.

If she works for 4 weeks and buys the bicycle, how much money will she have leftover?

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

CFS for top quality work

Annotations: starting rate, total

Ratio table/model drawn and labeled

Equivalent ratios identified

Answer statement is box

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

**EXIT TICKET**

|  |  |  |  |
| --- | --- | --- | --- |
| 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. Whole Foods sells bananas for $1.25 per pound. How much will it cost for 8 ½ pounds of bananas? Round your answer to the nearest penny.
2. To make Mr. Toro’s famous fruit salad, you need 1 mangos for every 2 bananas. To make his brother’s famous fruit salad, you need 2.5 mangos for every 3 bananas. They are each given 12 bananas. Using this information, decide which statement below is true and which is false.

|  |  |  |
| --- | --- | --- |
| Statement | True | False |
| Mr. Toro needs more mangos for his recipe than his brother does |  |  |
| Mr. Toro needs one more mango than his brother |  |  |
| Mr. Toro’s brother needs one more mango than Mr. Toro |  |  |