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

UNIT 2 LESSON 3

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| AIM: | SWBAT divide fractions |

**THINK ABOUT IT!**

Niome is trying to figure out how many groups of $\frac{1}{2}$ she can make from $\frac{3}{4}$. She is stumped because the denominators are not the same. Help Niome find the quotient of $\frac{3}{4} $and $\frac{1}{2}$.

Key Point

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| --- |
| When dividing fractions by fractions, the remainder represents part of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. |

**Interaction with New Material**

*Example #1)* Evaluate the expression $\frac{5}{3}÷\frac{4}{9}$

*Example #2)* Evaluate the expression $\frac{13}{8}÷\frac{3}{4}$

**PARTNER PRACTICE**

* CFS for top quality work
	+ Problem is annotated with margin notes to provide additional meaning
	+ Model is drawn accurately and clearly labeled
	+ Quotient is checked
	+ Quotient is identified and contextualized, as appropriate

|  |
| --- |
| *Bachelor Level* |

1. Evaluate each expression using a model
	1. $\frac{16}{10}÷\frac{3}{5}$
	2. $\frac{5}{6}÷\frac{1}{4}$

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| *Master Level* |

1. The area of Albert’s rectangular rug is $\frac{5}{2}$ square yards. The width of the rug is $\frac{2}{3}$ yard. What is the length?

**Check for Understanding**

Find the quotient: $\frac{7}{6}÷\frac{2}{3}$

1. $3\frac{1}{2}$
2. $3$
3. $1\frac{3}{4}$
4. 1

**INDEPENDENT PRACTICE**

* CFS for top quality work
	+ Problem is annotated with margin notes to provide additional meaning
	+ Model is drawn accurately and clearly labeled
	+ Quotient is checked
	+ Quotient is identified and contextualized, as appropriate

|  |
| --- |
| *Bachelor Level* |

1. Evaluate each expression using a model
	1. $\frac{2}{3}÷\frac{1}{2}$
	2. $\frac{7}{5}÷\frac{3}{10}$

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| --- |
| *Master Level* |

2) Ms. Carter found the quotient of $\frac{7}{5}÷\frac{3}{10}$ and she got $2\frac{1}{3}$ because 7 ÷ 3 = $2\frac{1}{3}$.

Which answer choice below explains her mistake?

1. She made a calculation error when dividing 7 by 3
2. She cannot divide the numerators to find the quotient because the denominators aren’t the same
3. She cannot divide the denominators to find the quotient because the numerators aren’t the same
4. She made no mistake; $2\frac{1}{3}$ is the correct quotient

3) Melanie is planning a hiking trip. She knows that she estimates that she will finish a liter of water every $\frac{3}{4}$ mile that she hikes. Using the table below, answer each of the following questions.

|  |  |
| --- | --- |
| **Trail** | **Distance (in miles)** |
| Frog Hollow Trail | $$2\frac{3}{4}$$ |
| Lily Pond Loop | $$\frac{11}{8}$$ |
| Starlight Point | $$\frac{7}{3}$$ |

* 1. How many liters of water will Melanie drink if she does the Lily Pond loop?
	2. How many liters of water will Melanie drink if she hikes to Starlight point and back?

4) Frieda ran a race that was $\frac{6}{5}$ miles long. She ran $\frac{2}{3}$ of the total distance before having to stop for a break. How far did she run before stopping for a break?

**Show your work.**

5) What value of y makes the equation below true?

$$\left(\frac{8}{6}\right)\left(y\right)=\frac{7}{3}$$

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| *PhD Level* |

6) A piece of wire is $\frac{3}{4}$ foot long. Hector needs to cut pieces of wire that are 2 inches long. How many pieces of wire can he cut?

7) Leah is buying tiles for her bathroom. Each tile is $\frac{3}{8}$ foot wide and covers an area that is $\frac{7}{3}$ square feet. The bathroom floor is in the shape of a rectangle. She is putting 8 tiles along the longer wall of the bathroom and 5 tiles along the shorter wall of the bathroom. What is the perimeter of the bathroom? The bathroom and one tile are pictured below.

w

l

Longer wall

Shorter wall

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

**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. Draw a model and evaluate the expression $\frac{3}{4}÷\frac{2}{3}$
2. A small box of cereal has $\frac{11}{8}$ cups of cereal. Each serving is $\frac{3}{4}$ of a cup. How many servings are in a small box of cereal?
	1. $1\frac{1}{32}$
	2. $1\frac{1}{6}$
	3. $1\frac{5}{6}$
	4. $3\frac{2}{3}$