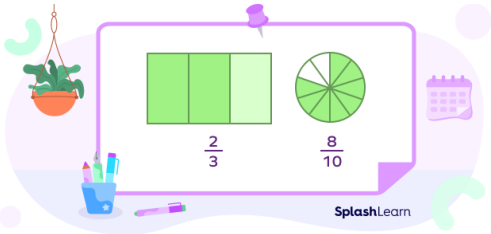
BASIC 9

WEEKLY LESSON PLAN – WEEK 7

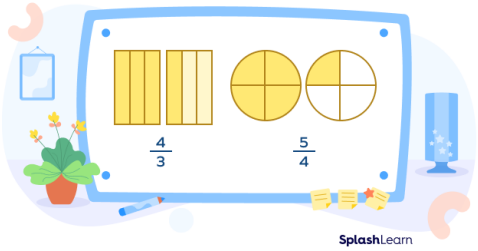
Strand:	Number		**Sub-Strand:**	Fractions, decimals and Percentages	
Content Standard:	B9.1.3.1 Apply the understanding of operations on fractions to solve problems involving fractions of given quantities and round the results to given decimal and significant places				
Indicator (s)	B9.1.3.1.1 Review fractions and solve problems involving basic operations on fractions		**Performance Indicator:** Learners can multiply and divide fractions.		
Week Ending	25-10-2024				
Class	B.S.9	**Class Size:**		**Duration:**	
Subject	Mathematics				
Reference	Mathematics Curriculum, Teachers Resource Pack, Learners Resource Pack, Textbook.				
Teaching / Learning Resources	Poster, Video,		**Core Competencies:**	• Demonstrate behaviour and skills of working towards group goals • Ability to select alternative(s) that adequately meet selected criteria	

DAYS/DATE	**PHASE 1 : STARTER**	**PHASE 2: MAIN**	**PHASE 3: REFLECTION**
MONDAY	Learners brainstorm to explain the concept "Fraction".	1. Assist Learners to identify examples of Fractions. 2. Discuss the types of Fractions with the Learners. 3. Call individual Learners at random to come to the chalkboard to write an example of each of the types of fractions. **Types of Fractions** Fractions are differentiated on the basis of the numerators and the denominators. Fractions are classified into the following types: 1. **Unit Fractions**: Fractions with numerator 1 are called unit fractions.	Through questions and answers, conclude the lesson. **Exercise;** 1. What is Fraction? 2. State 4 types of a Fraction. 3. Write two examples each of the types of Fractions mentioned in question 2.

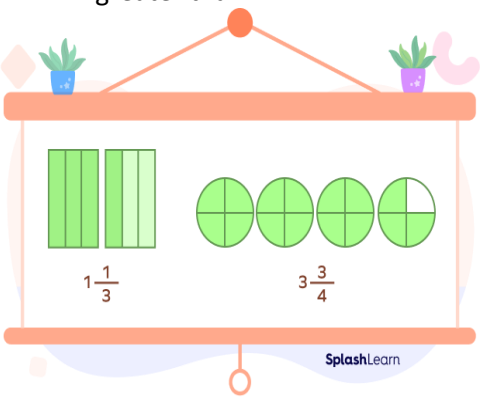
2. **Proper Fractions**: Fractions in which the numerator is less than the denominator are called proper fractions. A proper fraction is less than 1



3. **Improper Fractions**: Fractions in which the numerator is more than or equal to the denominator are called improper fractions. An improper fraction is greater than 1.

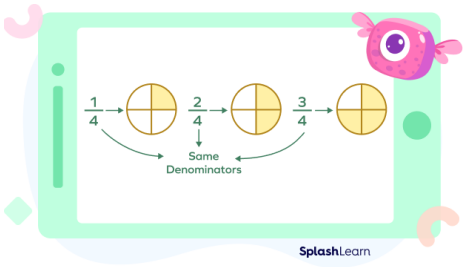
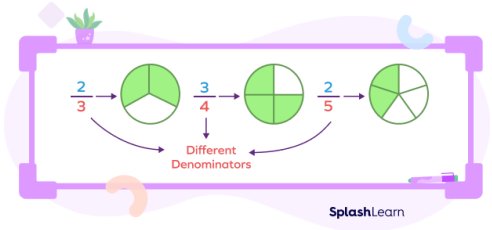
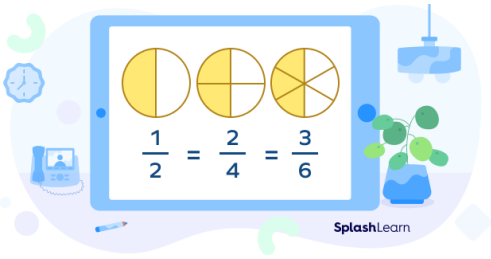


4. **Mixed Fractions**: Mixed fractions consist of a whole number and a proper fraction. Since mixed fractions are combinations of whole numbers and a fraction, mixed fractions are always greater than 1.



5. **Like Fractions:**

Fractions with the same denominators

		are called like fractions.  6. **Unlike Fractions**: Fractions with different denominators are called unlike fractions.  7. **Equivalent fractions**: Fractions that represent the same value after being simplified are called equivalent fractions. To get equivalent fractions we can multiply or divide both the numerator and the denominator of the given fraction by the same number.  	
WEDNESDAY	Demonstrate on adding and subtracting two fractions.	1. Engage Learners in adding two or more fractions. 2. Assist Learners to add and subtract equivalent fractions. 3. Learners brainstorm to add and subtract mixed fractions. 4. Assist Learners to add and subtract fractions with different denominators. 5. Assist Learners to create word problems involving adding and subtracting of fractions. **Adding fractions word problems** Adding fractions word problems arise in	Learners brainstorm to answer word problem involving adding and subtracting fractions. **Exercise;** 1. Jessica bought 8/9 of a pound of chocolates and ate 1/3 of a pound. How much was left? 2. Sally walked 3/4 of a mile before lunch and 1/2 of a mile after lunch. How far did she walk in all? 3. Tom bought a board that was 7/8 of a yard

		many situations. I will not show you how to add fractions here. Adding fractions will show you how to add fractions and it has a fraction calculator to help you practice. Example #1: John walked 1/2 of a mile yesterday and 3/4 of a mile today. How many miles has John walked? Solution **This word problem requires addition of** fractions Choosing a common denominator of 4, we get 1/2 + 3/4 = 2/4 + 3/4 = 5/4 So, John walked a total of 5/4 miles Example #2: Mary is preparing a final exam. She study 3/2 hours on Friday, 6/4 hours on Saturday, and 2/3 hours on Sunday. How many hours she studied over the weekend Solution This word problem requires addition of fractions Choosing a common denominator of 12, we get: 3/2 + 5/4 + 2/3 = 18/12 + 15/12 + 8/12 = 41/12 = 3.42 hours So, Mary studied a total of 3.42 hours Example #3: A recipe requires 1/2 teaspoon cayenne pepper, 3/4 teaspoon black pepper, and 1/4 teaspoon red pepper. How much pepper does this recipe need? Solution Choosing 4 as a common denominator, we get:	long. He cut off 1/2 of a yard. How much was left? 4. Sam rode his bike 2/5 of a mile and walked another 3/4 of a mile. How far did he travel? 5. The track is 3/5 of a mile long. If Tyrone jogged around it twice, how far did he run?

		1/4 + 3/4 + 1/2 = 1/4 + 3/4 + 2/4 = 5/4 = 1.25 So, the recipe needs 1.25 or 1 teaspoon and one-fourth of a teaspoon pepper. Subtracting fractions word problems Example #1: A recipe needs 3/4 teaspoon black pepper and 1/4 teaspoon red pepper. How much more black pepper does the recipe need? This fraction word problem requires subtraction. Solution: The fact that the problem is asking how much more black pepper the recipe needs is an indication that 3/4 is bigger than 1/4. However, it does not hurt to check! 3/4 - 1/4 = 2/4 = 1/2 The black pepper is 1/2 of a teaspoon more than the red pepper. Example #2: A football player advances 2/3 of a yard. A second player in the same team advances 5/4 of a yard. How much more yard did the second player advance? Again, we need to perform subtraction to solve this problem. **Solution** 5/4 - 2/3 = 15/12 - 8/12 = 7/12 6/12 is equal to 1/2, so 7/12 is just a bit more than half. So, the second player advanced by about half of a yard more. To be more precise though, you can say that the second player advanced by 7/12 of a yard more than the first player.	

		Example #3: John lives 3/8 mile from the Museum of Science. Sylvia leaves 1/4 mile from the Museum of Science. How much closer is Sylvia from the museum? **Solution** The fact that the word problem is saying how much closer Sylvia is, is an indication that 1/4 is smaller than 3/8. 3/8 - 1/4 = 3/8 - 2/8 = 1/8 Sylvia is closer to the library by 1/8 mile. You can also say that John is further away by 1/8 mile. **Example #4:** Maria caught shrimp that weighted 4 2/3 pounds. If she gave 3 1/6 pounds to his friends, how much shrimp did she have left? **Solution** In order to find out how much shrimp Maria is left with, we need to do the following subtraction. 4 2/3 - 3 1/6 4 2/3 - 3 1/6 = (4 - 3) + (2/3 - 1/6) 4 2/3 - 3 1/6 = 1 + (4/6 - 1/6) 4 2/3 - 3 1/6 = 1 + (3/6) 4 2/3 - 3 1/6 = 1 3/6 = 1 1/2 Maria has 1 1/2 pounds of shrimp left.	
FRIDAY	Learners brainstorm to create word problems involving multiplication and division of Fractions.	1. Demonstrate on how to multiply and divide Fraction word problems. 2. Assist Learners to multiply and divide two or more fractions from a word problem. 3. Discuss with the Learners about how to convert Fractions into decimals. **Dividing fractions word problems:**	Through questions and answers, conclude the lesson. **Exercise;** 1. A recipe needs 1/4 tablespoon salt. How much salt does 8 such recipe need? 2. Peter's truck gets him 10 2/3 miles per gallon. Suppose Peter's tank is empty and he puts 5

		Example #1: An Italian sausage is 8 inches long. How many pieces of sausage can be cut from the 8-inch piece of sausage if each piece is to be two-thirds of an inch? **Solution** Since you are trying to find out how many two-thirds there are in 8, it is a division of fractions problem. You will need to divide 8 by 2/3 in order to get the answer. $8 \div 2/3 = 8/1 \div 2/3$ $8 \div 2/3 = 8/1 \times 3/2$ $8 \div 2/3 = (8 \times 3)/(1 \times 2)$ $8 \div 2/3 = 24/2$ $8 \div 2/3 = 12$ Therefore, you can make 12 pieces of sausages having a length of 2/3 inches from an 8 inches long Italian sausage. **Example #2** How many halves are there in six-fourths? Again, since you are trying to find out how many halves there are in six-fourths, it is a division of fractions problem. You will need to divide 6/4 by 1/2 to get the answer. $6/4 \div 1/2 = 6/4 \times 2/1$ $6/4 \div 1/2 = (6 \times 2)/(4 \times 1)$ $6/4 \div 1/2 = 12/4$ $6/4 \div 1/2 = 3$ Therefore, there are 3 halves in six-fourths. **Example #3:**	1/2 gallons, how far can Peter go with the truck? 3. Two-thirds of the students in your class are boys. One-eighth of the boys play soccer. What fraction of the kids in your class are boys who play soccer? 4. Sue eats 3/8 of a cherry pie. Jan eats 1/4 of what was LEFT. How much of the pie did Jan eat? 5. Student Council bought Mrs. Donnelly two dozen (24) roses. 1/4 of them were white roses. How many white roses were there?

		An airplane covers 50 miles in 1/5 of an hour. How many miles can the airplane cover in 5 hours? This problem is a combination of division and multiplication of fractions. First, find out how many fifths (1/5) are there in 5. This is a division of fractions problem. You will need to divide 5 by 1/5. $5 \div 1/5 = 5/1 \div 1/5$ $5 \div 1/5 = 5/1 \times 5/1$ $5 \div 1/5 = (5 \times 5)/(1 \times 1)$ $5 \div 1/5 = 25/1$ $5 \div 1/5 = 25$ Then, you need to multiply 50 by 25 to get the answer. $50 \times 30 = 1250$ In 5 hours, the airplane will cover 1250 miles.	

Name of Teacher: **School:** **District:**