

Marking Period	Unit Title	Recommended Instructional Days
3	Divide Fractions	9 - 13 days
Domain		
<i>Strand:</i>  5.NF.B.3 Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. For example, interpret $3/4$ as the result of dividing 3 by 4, noting that $3/4$ multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size $3/4$. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?  5.NF.B.7.a Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. For example, create a story context for $(1/3) \div 4$, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that $(1/3) \div 4 = 1/12$ because $(1/12) \times 4 = 1/3$.  5.NF.B.7.b Interpret division of a whole number by a unit fraction, and compute such quotients. For example, create a story context for $4 \div (1/5)$, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that $4 \div (1/5) = 20$ because $20 \times (1/5) = 4$.  5.NF.B.7.c Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. For example, how much chocolate will each person get if 3 people share $1/2$ lb of chocolate equally? How many $1/3$-cup servings are in 2 cups of raisins? Key:  Major Cluster  Supporting Cluster  Additional Cluster		

Progress Indicator: ♦ Tests ♦ Homework / Classwork ♦ Projects ♦ Formative assessments ♦ Summative assessments

Mathematical Practices:

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reason of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSLS-CLKS within Unit

Essential Questions:

Lesson 8.1 How can you divide a whole number by a fraction and divide a fraction by a whole number?

Lesson 8.2 How can the strategy, *draw a diagram*, help you solve fraction division problems by writing a multiplication sentence?

Lesson 8.3 How does a fraction represent division?

Lesson 8.4 How can you divide fractions by solving a related multiplication sentence?

Lesson 8.5 How can you use diagrams, equations, and story problems to represent division?

Essential Understandings:

Lesson 8.1 Divide a whole number by a fraction and divide a fraction by a whole number.

Lesson 8.2 Solve problems using the strategy, *draw a diagram*.

Lesson 8.3 Interpret a fraction as division and solve whole-number division problems that result in a fraction or mixed number.

Lesson 8.4 Divide a whole number by a fraction and divide a fraction by a whole number.

Lesson 8.5 Represent division by drawing diagrams and writing story problems and equations.

Vocabulary:

- Dividend

- Equation
- Fraction
- Quotient
- Whole Number

Suggested Activity Description(s):

Show what you know, Problem of the Day, Fluency Builders, Personal Math Trainer, Math on the Spot Videos, Real World Videos, Vocabulary Preview Activity, Reteach and Enrichment Activities, Interactive Student Edition Textbook, RtI Activities, Grab and Go Differentiated Centers, Journal Writing, Advanced Learners Activities, Assessments, Standards Focus Packets for the related NJSLs, Success for English Learners Activities, Performance Task

Interdisciplinary Connections:

STEM Activity: In Chapter 8, students develop their understanding of dividing fractions by dividing whole numbers by fractions. These same topics are used often in the development of various science concepts and process skills. Help students make the connection between math and science through the S.T.E.M. activities and activity worksheets found at www.thinkcentral.com.

In Chapter 8, students connect math and science with the S.T.E.M. Activity Meet Scientists and the accompanying worksheets (pages 147 and 148). Through this S.T.E.M. Activity, students will connect to the GO Math! Chapter 8 concepts and skills with various common scientific problems, including modeling and solving a real world problem involving fractions. It is recommended that this S.T.E.M. Activity will be used after Lesson 8.4.

Science:

1. Cheetahs are the fastest four-legged animals on Earth. They can run at speeds of up to 70 miles per hour, covering 20 feet with each stride. Adult cheetahs can weigh up to 140 pounds, but their cubs are tiny at birth. It is not unusual for a newborn cheetah to weigh $\frac{1}{3}$ pound. The total weight of a litter of newborn cheetahs was 3 pounds. If all the cubs weighed $\frac{1}{3}$ pound, how many cubs were in the litter?

Social Studies:

1. At 2,179 miles in length, the Appalachian Trail is America's longest marked footpath. It passes through 14 states and is marked by approximately 165,000 white paint stripes on trees. More than 10,000 people have hiked the entire length of the trail. Most have taken about 4 to 6 months to complete the hike. A hiker takes about 5 million footsteps walking the entire 2,179 miles. Many people choose to hike just portions of the trail. Suppose you decided to hike $\frac{1}{3}$ of the trail in 5 equal segments. What fraction of the entire trail would each segment of your hike represent?

Language Arts:

1. Vocabulary Builder Activity, Go Math pg. 490
2. Vocabulary Game, Go Math pg. 490 A
3. The Write Way, Go Math pg. 490 B

4. Grab and Go Reader - Cranking Out the Numbers			
Spot Light On: Use multiple ways of assessing student understanding.			
Social and Emotional Learning: Competencies		Social and Emotional Learning: Sub-Competencies	
SEL Competencies: • Self- awareness • Social Awareness • Self- Management • Relationship Skills • Responsible Decision-Making		• Recognizing the importance of self-confidence in handling daily tasks and challenges. • Demonstrate an awareness of the expectations for social interactions in a variety of ways. • Demonstrate an understanding of the need for mutual respect when viewpoints differ. • Identify and apply ways to persevere through alternative methods to achieve goals. • Utilize positive communication and social skills to interact effectively with others. •Develop, implement, and model effective problem solving and critical thinking skills.	
Assessments (Formative) To show evidence of meeting the standard/s, students will successfully engage within:		Assessments (Summative) To show evidence of meeting the standard/s, students will successfully complete:	
Formative Assessments: • Teacher Observations • Exit Tickets • Quizzes • Self Assessments • Math Journals • Homework/Classwork • Teacher created assessments		Benchmarks & Summative Assessments: Chapter/Unit Assessments • Standardized Tests • District Assessments • Project-based Assessments	
Differentiated Student Access to Content: Teaching and Learning Resources/Materials			
Core Resources	Alternate Core Resources IEP/504/At-Risk/ESL	ELL Core Resources	Gifted & Talented Core Resources
Go Math Workbook, IXL, Personal Math Trainer, Math on the Spot Videos, My HRW, Khan Academy,	Reteaching worksheets, Skill building workbook, Math manipulatives, Leveled practice	Dictionary for native language, Video tutorial in native language, Success for English Learners worksheets, Go	ST Math Challenge Objectives, G&T tasks, Enrichment worksheets, Art of Problem

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Illustrative Mathematics, Learn360, TeacherTube, BrainPOP, Freckle, LearnZillion, MobyMax, 60 minutes of weekly ST Math, Edulastic, Achieve the Core, Desmos	worksheets	Math Leveled Strategies for English Learners, Go Math Linguistic Support	Solving, Leveled assessments, Go Math Teaching for Depth
Supplemental Resources			
Technology: • Chromebooks • Online math manipulatives Other: • Google Classroom, Google Meets, Schoology, Interactive Workbooks • Illustrative Mathematics • insidemathematics.org • National Library of Virtual Manipulatives			
Differentiated Student Access to Content: Recommended <u>Strategies & Techniques</u>			
Core Resources	Alternate Core Resources <i>IEP/504/At-Risk/ESL</i>	ELL Core Resources	Gifted & Talented Core
Deliver instruction utilizing varied learning styles including audio, visual, and tactile/kinesthetic, provide individual instruction as needed, modify assessments and/or rubrics.	Utilize a multi-sensory (VAKT) approach during instruction, provide alternate presentations of skills by varying the method (repetition, simple explanations, additional examples, modeling, etc.), modify test content and/or format, allow students to retake test for additional credit, provide additional times and preferential seating as needed, review, restate and repeat directions, provide study guides, and/or break assignments into segments of shorter tasks.	Extend time requirements, preferred seating, positive reinforcement, check often for understanding/review, oral/visual directions/prompts when necessary, supplemental materials including use of an online bilingual dictionary, and modified assessment and/or rubric.	Create an enhanced set of introductory activities, integrate active teaching/learning opportunities, incorporate authentic components, propose interest-based extension activities, and connect students to related content.

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NJSLS CAREER READINESS, LIFE LITERACIES & KEY SKILLS	Disciplinary Concept(s): Impacts of Decisions	
	Core Ideas:	Curiosity and willingness to try new ideas (intellectual risk taking) contributes to the development of creativity and innovation.
	Performance Expectation/s:	9.4.12.CI.1: Demonstrate the ability to reflect, analyze, and use creative skills and ideas.
	Career Readiness, Life Literacies, & Key Skills Practices	
	Act as a responsible and contributing community member and employee. Attend to financial well-being. Consider the environmental, social and economic impacts of decisions. Demonstrate creativity and innovation. Utilize critical thinking to make sense of problems and persevere in solving them. Model integrity, ethical leadership and effective management. Plan education and career paths aligned to personal goals. Use technology to enhance productivity, increase collaboration and communicate effectively. Work productively in teams while using cultural/global competence.	

New Jersey Legislative Statutes and Administrative Code (place an “X” before each law/statute if/when present within the curriculum map)									
	Amistad Law: <i>N.J.S.A. 18A 52:16A-88</i>		Holocaust Law: <i>N.J.S.A. 18A:35-28</i>		LGBT and Disabilities Law: <i>N.J.S.A. 18A:35-4.35</i>	X	Diversity & Inclusion: <i>N.J.S.A. 18A:35-4.36a</i>		Standards in Action: <i>Climate Change</i>