

Grade: 7th		Subject: Math 7th Grade	
Materials: notes, standard playing cards, worksheets		Technology Needed:	
Instructional Strategies: <input type="checkbox"/> Direct instruction <input type="checkbox"/> Guided practice <input type="checkbox"/> Socratic Seminar <input type="checkbox"/> Learning Centers <input type="checkbox"/> Lecture <input type="checkbox"/> Technology integration <input type="checkbox"/> Other (list) <input type="checkbox"/> Peer teaching/collaboration/cooperative learning <input type="checkbox"/> Visuals/Graphic organizers <input type="checkbox"/> PBL <input type="checkbox"/> Discussion/Debate <input type="checkbox"/> Modeling		Guided Practices and Concrete Application: <input type="checkbox"/> Large group activity <input type="checkbox"/> Independent activity <input type="checkbox"/> Pairing/collaboration <input type="checkbox"/> Simulations/Scenarios <input type="checkbox"/> Other (list) Explain: <input type="checkbox"/> Hands-on <input type="checkbox"/> Technology integration <input type="checkbox"/> Imitation/Repeat/Mimic	
Standard(s): 7.NS. 2 Apply and extend previous understandings of multiplication, division, and fractions to multiply and divide rational numbers.		Differentiation Below Proficiency: Students struggle with converting mixed numbers into improper fractions, struggling with positive and negative signs, or are struggling to multiply fractions. Provide extra guided practice during work time in between examples and make sure they have a strong partner for activity and provide extra guidance during activity as needed. Above Proficiency: Students are able to use cross canceling to simplify expressions, understand how to determine positive and negative signs before multiplying. Have more challenging problems for them to work on during work time or they can help a classmate. Approaching/Emerging Proficiency: Student is able to multiply fractions and can convert mixed numbers to improper fractions. They may struggle with cross canceling to simplify or determining positive or negative when there are multiple signs. Have student work with a partner in class to continue approaching proficiency. Modalities/Learning Preferences: visual, modelling, repetition	
Objective(s): The learner will be able to multiply fractions and mixed numbers by converting mixed numbers to improper fractions. Bloom's Taxonomy Cognitive Level: Applying, understanding			
Classroom Management- (grouping(s), movement/transitions, etc.): Students will sit in their assigned seats and collaborate with a partner if they choose to during example work time. Students will work with their partner during activity and be on task.		Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.) Students will be engaged in taking notes and answering/asking questions. Students will be on task during card game activity.	
Minutes	Procedures		
	Set-up/Prep: Have notes, worksheet, and decks of cards ready		
5	Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.) Have students recall what they learned about multiplying integers. Review the multiplication rules for positive and negative signs: When two signs are different the product is negative and when two signs are the same the product is positive. Even number of negative signs is positive; odd number of negative signs is negative.		
10	Explain: (concepts, procedures, vocabulary, etc.) Model for students how to multiply fractions. Show students how to use cross-cancelling to simplify the problems and convert mixed numbers into improper fractions.		

	<p>Example:</p> <p>$(4/7)(3/5) = 12/35$ $(2/3)(1/5) = 2/15$ $(3/4)(2/3) = 6/12 = 1/2$ $(4/9)(3/8) = 12/72 = 1/6$</p> <p>$2\ 1/3 \times 1\ 3/4 = 4\ 1/12$ $-3\ 1/3 \times -2\ 7/10 = 9$ $(4/7) \times -3 \times (1/2) = -6/7$ $-2(-1\ 1/4) = 2\ 1/2$ $(2/3)^2 = 4/9$</p>
20	<p>Explore: (independent, concrete practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions) Explain the card game activity and then let students find a partner and give out decks of cards and worksheets. Walk around the room while they are doing the activity to check for understanding. If students finish activity, they can begin working on homework assignment.</p>
10	<p>Review (wrap up and transition to next activity): Have each pair of students share one of the problems that they found interesting or difficult from the card activity.</p>
<p>Formative Assessment: (linked to objectives) Progress monitoring throughout lesson- clarifying questions, check- in strategies, etc. Walking around room while the students are working on examples and during the activity. Checking for understanding based on the work they are showing. Consideration for Back-up Plan: If students are not ready to multiply fractions, we will review multiplying integers focusing on positive and negative signs. Students can go onto google classroom and watch a video if necessary or work on practice problems.</p>	<p>Summative Assessment (linked back to objectives) End of lesson: Students will be assessed based on the work they showed on the worksheet for the activity.</p> <p>If applicable- overall unit, chapter, concept, etc.:</p>
<p>Reflection (What went well? What did the students learn? How do you know? What changes would you make?): Overall, I think the lesson went very well. The students seemed to have enjoyed the card game activity. The one thing I would do differently if I were to teach this lesson again is fully explain the game and demonstrate before passing out the worksheets and decks of cards. The students seemed distracted and not very attentive to the instructions once they had the cards. I would also consider putting the instructions on top of the worksheet for them to refer back to. For the most part it went well, but there was some confusion about the activity.</p>	

Instructions for card game:

1. In groups of 2, split the deck of cards in half
2. Each person will flip over two cards to make a fraction
 - a. Red card → positive
 - b. Black card → negative
3. Multiply the two fractions (do six of these)
4. Each person will flip over three cards to make a mixed number
 - a. The first card is the whole number the second and third will be the fraction
 - b. Red card → positive
 - c. Black card → negative
5. Multiply the mixed numbers (do six of these as well)

Name: _____

Multiplying Fractions Card Game

1. _____ x _____

7. _____ x _____

2. _____ x _____

8. _____ x _____

3. _____ x _____

9. _____ x _____

4. _____ x _____

10. _____ x _____

5. _____ x _____

11. _____ x _____

6. _____ x _____

12. _____ x _____

Name: _____

Multiplying Rational Numbers

1. $\frac{1}{8} \times \frac{5}{6} =$

10. $6.4 \times 5.9 =$

2. $\frac{3}{7} \times \frac{4}{5} =$

11. $9.2 \times 1.6 =$

3. $5\frac{3}{8} \times \frac{8}{9} =$

12. $4.21 \times 6.1 =$

4. $\frac{1}{2} \times 2\frac{6}{7} =$

13. $11.4 \times 7.5 =$

5. $\frac{4}{5} \times 4\frac{5}{9} =$

14. $2.6 \times 3.72 =$

6. $3\frac{1}{3} \times 2\frac{1}{5} =$

15. $14.84 \times 2.84 =$

7. $1\frac{3}{8} \times 3\frac{1}{3} =$

16. $9.92 \times 4.54 =$

8. $\left(2\frac{1}{7}\right)^2 =$

17. $(-1.5)^2$

9. $-3\frac{2}{5} + \frac{2}{10} \times \frac{5}{6} =$

18. $3.8 \times 0.65 - 1.4 =$

19. A baker needs to make 8 batches of cookies for a party. If each batch requires $2\frac{3}{4}$ cups of flour, how many cups will he need?

20. The Science Club went to a history museum. It costs \$7.25 for an admission ticket. If 90 members went to the museum, what would the total cost be?