

Factors and GCF – Day 1

Name: Lisa Booth
Subject: 6th Grade Math

Approximate Time: 60 minutes

Objectives:

The Student Will...

1. *list* the factors of a given number. (**Math 1.c; Knowledge**)
2. *compare* the factors of two or more numbers to find the GCF. (**Math 1.c; Analysis**)

Materials:

Teacher: Overhead/transparencies/vis-a-vis

Student: Binder/pencil/whiteboards

Warm-Up:

1. TSW review previous lessons by answering these questions,
 1. List four multiples of 4, 6, and 10.
 2. Find the least common multiple of 3 and 5.
 3. Find the least common multiple of 4 and 6.
2. TTW go over the questions with the students.

Set:

1. TTW ask the students if they have had peanut butter and jelly sandwiches.
2. TTW ask what makes up the sandwich? *peanut butter, jelly, and bread.*
3. TTW say, just like that sandwich, numbers can be broken down into parts. These parts are called factors.
4. TTW have a student read the objectives from the board.

Procedure:

1. TSW take notes,
 1. Factor: One number is a factor of another if it divides that number with no remainder.
 2. Divisor is another word for factor.
 3. TTW have the student write a sentence using the numbers 5, 35, and 7. *5 and 7 are factors of 35.*
 4. TTW do several examples of listing the factors of numbers,
 1. 6: 1, 2, 3, 6
 2. 8: 1, 2, 4, 8
 3. 24: 1, 2, 3, 4, 6, 8, 12, 24
 5. GCF: Greatest Common Factor, the largest factor two or more numbers have in common.
 6. TTW do several examples,
 1. 6 and 8; 6: 1, 2, 3, 6 8: 1, 2, 4, 8 LCM = 2
 2. 5 and 10; 5: 1, 5 10: 1, 2, 5, 10 LCM = 5
2. TTW hand out whiteboards (**Indicator 10**; non-verbal communication)
3. TSW answer questions about listing factors and finding the GCF of two or more numbers.
Continue until 10 minutes remain in class.

4. Collect whiteboards, markers, and erasers.

Closure:

1. TTW have a student read the objectives from the board.
2. TTW review by asking questions.
3. TTW assign homework, Pg. 190 #1-12
4. TTW explain that we will be using factors later on when we start working with fractions.

Assessment:

Objective: *list* the factors of a given number.

Informal: TTW observe (M) as students list factors on their whiteboards (C).

Formal: TTW assign homework (M) using lists to find the GCF of numbers (C). The homework will be collected, graded, and recorded in the grade book (D).

Objective: *compare* the factors of two or more numbers to find the GCF.

Informal: TTW observe (M) as students compare lists to find the GCF on their whiteboards (C).

Formal: TTW assign homework (M) using lists to find the GCF of numbers (C). The homework will be collected, graded, and recorded in the grade book (D).

Homework – Day 1

Pg. 190 #1-12

Make a list to find the GCF of each set of numbers.

1. 14, 35
2. 24, 25
3. 10, 18
4. 15, 19
5. 24, 45
6. 11, 23
7. 9, 16
8. 25, 32
9. 30, 35
10. 26, 34
11. 12, 15, 21
12. 6, 8, 12

Prime and Composite Numbers – Day 2

Name: Lisa Booth
Subject: 6th Grade Math

Approximate Time: 60 minutes

Objectives:

The Student Will...

1. *identify* prime and composite numbers. (**Math 1.c; Knowledge**)
2. *explain* why one is not a prime number. (**Math 1.c; Comprehension**)

Materials:

Teacher: Overhead/transparencies/vis-a-vis/notes/number chart

Student: Binder/pencil/number chart/colored pencils

Warm-Up:

1. TSW review the previous lesson by answering these questions,
 1. List the factors of,
 1. 18
 2. 20
 3. 12
 2. Find the GCF of,
 1. 12 and 16
 2. 15 and 25
2. TTW go over the questions with the students.

Set:

1. TTW have a student read the objective from the board.
2. TTW say, yesterday we learned about factors. There are some special numbers that have only two factors.
3. TTW ask if a student can come up with a number with only two factors.
4. TTW explain that these numbers are called prime numbers, and today we will be learning about prime and composite numbers.

Procedure:

1. TSW take notes,
 1. Prime Number – A number that has two factors, one and the number itself
 2. Composite Number – A number that has more than two factors
2. TSW fill out the number chart,
 1. TTW hand out crayons/colored pencils and the number chart
 2. TTW fill out the chart on the overhead and TSW follow along.
 1. Circle the number two. Cross off all the multiples of two (review multiple if needed).
 2. Circle the next blank number. Cross off all of those multiples. (The second number should be three)
 3. Continue until all of the numbers have been, either circled or crossed off.
 4. Have students use different colors for each number's multiples, some numbers will have

multiple crosses through them.

3. TSW write the following questions on the back of their number chart, the number charts with answered questions will be collected for a grade the following day along with the homework.
 1. Is one a prime number? Why or why not?
 2. Which numbers have the most factors? How can you tell?
 3. Which numbers have only one factor in addition to one and the number itself?

Closure:

1. TTW read the objectives.
2. TTW ask questions to review the lesson.
3. TTW assign homework, Pg. 187 #8-25.

Assessment:

Objective: *identify* prime and composite numbers.

Informal: TTW observe (M) as students fill out their number charts (C).

Formal: TTW assign homework (M) from the text book asking students to identify numbers as prime or composite (C), the homework will be collected, graded, and recorded in the grade book (D).

Objective: *explain* why one is not a prime number.

Informal: TTW listen (M) as students begin answering the questions on the back of their number charts (C).

Formal: TTW collect the number charts (M) with the answered questions on the back (C), they will be graded and recorded in the gradebook (D).

Homework – Day 2

Pg. 187 #8-25

Tell whether each number is prime or composite.

8. 55

9. 51

10. 103

11. 100

12. 59

13. 83

14. 43

15. 19

16. 72

17. 90

18. 44

19. 7

20. 80

21. 86

22. 93

23. 71

24. 150

25. 56

Introduce Fractions – Day 3

Name: Lisa Booth
Subject: 6th Grade Math

Approximate Time: 60 minutes

Objectives:

The Student Will...

1. identify the parts of a fraction. (**Math 1.a; Knowledge**)
2. write fractions based on word problems. (**Math 1.a; Comprehension**)

Materials:

Teacher: Overhead/transparencies/vis-a-vis

Student: Binder/pencil/individual whiteboards

Warm-Up:

1. TSW review the previous lesson by answering these questions,
 1. Tell whether each number is prime or composite,
 1. 13
 2. 24
 3. 16
 4. 7
 5. 93
 2. TTW go over the answers with the students.

Set:

1. TTW have a student read the objective from the board.
2. TTW talk about how the students share their food at lunch. TTW ask questions about how much of a cookie each person gets if they split it evenly.
3. TTW ask where else do we see fractions? *Ask the band people about music, whole notes, half notes, quarter notes, etc. (**Indicator 6 and 7**)*
4. TTW explain that today we will be working with fractions.

Procedure:

1. TSW take notes, (**Indicator 21**)
 1. Numerator: The top number of a fraction, tells us the number of parts we are looking at.
 2. Denominator: The bottom number of a fractions, tells us the number of parts in the whole.
 3. Division Bar: The line that separates the numerator and denominator.
2. TTW hand out whiteboards, markers, and erasers. (**Indicator 21**)
3. TTW ask questions about identifying the parts of a fraction.
 1. Write the numerator of $\frac{4}{9}$
 2. Write the denominator of $\frac{2}{3}$.
4. TTW give word problems on the overhead, and the students must write the fraction asked for in the problem.
 1. There is a bowl of 20 marbles. 7 of the marbles are blue. What fraction of marbles are blue?

2. 3 friends evenly split a cookie. How much of the cookie did each friend get?
5. Stop questions 10 minutes before the bell to collect the whiteboards.

Closure:

1. TTW read the objectives from the board.
2. TTW review the lesson by asking questions.
3. TTW tell the students that tomorrow we will be drawing models of fractions.
4. TTW assign a homework worksheet. (**Indicator 9**; the last question has the students ask their parents when they have used fractions in daily life.)

Assessment:

Objective: *identify* the parts of a fraction.

Informal: TTW observe (M) as students write answers on their whiteboards (C).

Formal: TSW take a unit test (M) covering indentifying fractions (C). The test will be graded and recorded in the grade book (D).

Objective: *write* fractions based on word problems.

Informal: TTW observe (M) as students write answers on their whiteboards (C).

Formal: TTW assign a worksheet (M) of word problems that the students must turn into fractions (C). The worksheet will be collected, graded, and recorded in the grade book (D). *worksheet not shown here.

Pattern Block Fractions – Day 4

Name: Lisa Booth
Subject: 6th Grade Math

Approximate Time: 60 minutes

Objectives:

The Student Will...

1. *explain fractions using pattern blocks.* (**Math 1.a; Comprehension**)

Materials:

Teacher: Pattern Blocks/worksheet for students
Student: Binder/pencil

Warm-Up:

1. TSW review the previous lesson by answering these questions,
 1. Circle the numerator and box the denominator,
 1. $\frac{1}{4}$
 2. $\frac{5}{9}$
 3. $\frac{3}{10}$
 4. $\frac{12}{15}$
 5. $\frac{3}{17}$

Set:

1. TTW have a student read the objective from the board.
2. TTW explain that we will be using pattern blocks to represent fractions today.

Procedure:

1. TTW go over the pattern block rules.
 1. The pattern blocks must stay on the desks at all times.
 2. No throwing of the pattern blocks.
2. TTW explain that there will be a worksheet to fill out using the pattern blocks.
3. TSW get into their groups. (**Indicator 15**)
 1. Three desks form a group, based on the desk number.
4. TTW pass out the pattern blocks. (**Indicator 21**)
5. TTW ask what students notice about the pattern blocks, color, shape, size.
 1. Review the different shapes here, hexagon, trapezoid, rhombus, triangle, square.
6. TTW hand out the worksheet.
7. TTW monitor as students begin work.
8. TTW collect the blocks and worksheets with 7 minutes left.

Closure:

1. TTW ask students what they found on the worksheet.
 1. What fraction of the hexagon was the triangle? the rhombus? the trapezoid? How could you

tell?

2. Which pieces were larger? How did that change the fraction?
2. TTW explain that today we used pattern blocks to represent fractions, tomorrow we will learn how to draw models of fractions.

Assessment:

Objective: *explain* fractions using pattern blocks.

Informal: TTW observe and question (M) as students work on their worksheets (C).

Formal: TTW collect the worksheet (M) on pattern blocks (C), grade it and record the grade in the grade book (D).

Worksheet – Day 4

Name _____
Date _____
Period _____

Pattern Block Worksheet
Due: At the end of class

1. Using only one kind of block, how many hexagons can you make that are the same size and shape as the yellow hexagon? _____

Draw pictures of these hexagons below.

How many trapezoids make up one hexagon? _____

If the hexagon is one whole, what is one trapezoid? _____

How many rhombuses make up one hexagon? _____

If the hexagon is one whole, what is one rhombus? _____

How many triangles make up one hexagon? _____

If the hexagon is one whole, what is one triangle? _____

2. Using a combination of blocks, how many hexagons can you make that are the same size and shape as the yellow hexagon? _____

Draw these hexagons in the spaces provided below. In the blanks provided, tell how much of the whole hexagon is represented by the different blocks. You might not fill in all of the boxes.

<p>Trapezoid = _____</p> <p>Rhombus = _____</p> <p>Triangle = _____</p>	<p>Trapezoid = _____</p> <p>Rhombus = _____</p> <p>Triangle = _____</p>
<p>Trapezoid = _____</p> <p>Rhombus = _____</p> <p>Triangle = _____</p>	<p>Trapezoid = _____</p> <p>Rhombus = _____</p> <p>Triangle = _____</p>
<p>Trapezoid = _____</p> <p>Rhombus = _____</p> <p>Triangle = _____</p>	<p>Trapezoid = _____</p> <p>Rhombus = _____</p> <p>Triangle = _____</p>

Fraction Models – Day 5

Name: Lisa Booth
Subject: 6th Grade Math

Approximate Time: 60 minutes

Objectives:

The Student Will...

1. *model* fractions. (**Math 1.a; Synthesis**)

Materials:

Teacher: Overhead/transparencies/vis-a-vis

Student: Binder/pencil/construction paper/markers

Warm-Up:

1. TSW review the previous lesson by answering these questions,
 1. A whole is divided into 6 parts, how much is each part?
 2. There are 8 apples in the dish, 3 of them are green. What fraction of apples are green?
 3. A student has 3 red pencils, 2 blue pencils, and 4 yellow pencils. What fraction of the pencils are blue?
2. TTW go over the problems with the students.

Set:

1. TTW have a student read the objective from the board.
2. TTW have a student come up and draw a picture of a hexagon made up of triangles. (from yesterday)
3. TTW have another student come up and color in one piece. (the teacher can also hold up one triangle)
4. TTW tell the students that they just drew a model of 1/6.
5. TTW give/ask for times when drawing fraction models might be useful. *Slicing a pie, to compare fractions, or how to split a cookie. TTW also explain that when you see pie charts in science books, or social studies, this is another way to represent fractions. (Indicator 7)*

Procedure:

1. TTW write on the overhead the rules for fraction models,
 1. You must start with a whole. *It can be any shape, but circles or bars work best.*
 2. You must divide the whole into EQUAL parts. *the number of equal parts depends on what the denominator is.*
 3. Shade in the number of parts that match your numerator.
2. TTW hand out slips of paper with 5 fractions written on them.
 1. Each slip can have different fractions.
 2. TSW draw models of those fractions to create a poster.
3. TTW pass out colored paper and markers, for the students to use to create their posters. (**Indicator 21**)

Closure:

1. TTW have students come to the board and draw some of their models and explain what they did. (**Indicator 15**)
2. TTW have the rest of the students say what fraction is being modeled.

Assessment:

Objective: *model* fractions.

Informal: TTW observe (M) as students create their posters (C).

Formal: TTW collect the finished posters (M) and grade them for correct modeling (C). The grades will be recorded in the grade book (D).

Poster – Day 5

Fraction Lists for Poster

1. $\frac{1}{2}$, $\frac{4}{7}$, $\frac{2}{9}$, $\frac{1}{10}$, $\frac{3}{4}$
2. $\frac{1}{4}$, $\frac{5}{9}$, $\frac{3}{8}$, $\frac{2}{7}$, $\frac{2}{3}$
3. $\frac{1}{3}$, $\frac{4}{5}$, $\frac{7}{8}$, $\frac{2}{5}$, $\frac{1}{5}$
4. $\frac{6}{8}$, $\frac{3}{5}$, $\frac{1}{4}$, $\frac{6}{7}$, $\frac{3}{10}$

Poster Rubric

Each fraction is worth 5 points,

Model is labeled (1 point)

Correct denominator is modeled (1 point)

Correct numerator is shaded in (1 point)

Each part is of equal size (1 point)

Neatness (1 point)

Total points possible = 25

Equivalent Fractions – Day 6

Name: Lisa Booth
Subject: 6th Grade Math

Approximate Time: 60 minutes

Objectives:

The Student Will...

1. write two equivalent fractions for a given fraction. (**Math 1.a, 1.d; Knowledge**)

Materials:

Teacher: Overhead/transparencies/vis-a-vis/matching fractions cards/worksheet

Student: Binder/pencil

Warm-Up:

1. TSW review the previous lesson by answering these questions,
 1. Draw a model of the following fractions,
 1. $\frac{1}{2}$
 2. $\frac{3}{6}$
 3. $\frac{4}{7}$
 4. $\frac{2}{10}$
 5. $\frac{1}{5}$

Set:

1. TTW have a student read the objective from the board.
2. TTW ask if the students notice anything about the models from the warm-up. *some might notice that 1 and 2 are similar and 4 and 5 are similar.*
3. TTW say that they are called equivalent fractions.
4. TTW ask which would have more money, 50 pennies or 2 quarters? *they have the same amount of money, both are worth 50 cents.*

Procedure:

1. TSW take short notes,
 1. Equivalent -- numbers or values that represent the same amount.
2. TTW do a few examples on the overhead with manipulatives (TSW continue taking notes on this)
 1. $\frac{1}{2} = \frac{2}{4} = \frac{3}{6}$ (multiply both the numerator and denominator by the same number)
 2. $\frac{1}{4} = \frac{2}{8}$
 3. $\frac{2}{6} = \frac{1}{3}$ (divide both the numerator and denominator by the same number)
3. TTW hand out index cards with fractions on them to each student.
 1. TSW match the equivalent fractions.
 2. TSW complete the worksheet showing the pairs of equivalent fractions and add their own equivalent fraction. TSW also draw a model to show that the fractions are equivalent.
 3. Due at the end of class
4. Remediation – for students who need more work with fraction models. (**Indicator 5**)

1. These students will get a worksheet that has fractions and blank fraction bars.
2. TSW fill in the fraction bars to show the correct fraction.
3. There will be some equivalent fractions on the worksheet, to keep these students on track, they will have to match the equivalent fractions by looking at the models.
5. Enrichment – for students who finish quickly and understand equivalent fractions. (**Indicator 5**)
 1. TSW use the computers and go to <http://illuminations.nctm.org/tools/fraction/fraction.asp>
 2. The website is for a fraction game. It uses equivalent fractions and introduces the concept of adding fraction and comparing fractions. For the game, pieces need to be moved across 'number lines.' Each number line is divided into halves, thirds, fourths, fifths, sixths, eighths, or tenths. Based on fraction cards the pieces need to move across the number lines, without moving farther than the fraction given on the card.
6. TTW monitor as students work on matching the equivalent fractions.

Closure:

1. TTW review the lesson by asking questions, and having students give their answers for the matching activity.
2. TTW read the objective.
3. TTW preview the next lesson by saying, today we found equivalent fractions, tomorrow we will learn about which equivalent fraction is the simplest form of that fraction.

Assessment:

Objective: *write* two equivalent fractions for a given fraction.

Informal: TTW observe (M) as students work in groups to match equivalent fractions (C).

Formal: TTW collect (M) the students' work for the equivalent fractions matching exercise (C). The work will be graded and recorded in the gradebook (D).

Simplify Fractions – Day 7

Name: Lisa Booth
Subject: 6th Grade Math

Approximate Time: 60 minutes

Objectives:

The Student Will...

1. *reduce fractions to their simplest form. (Math 1.a; Application)*

Materials:

Teacher: Overhead/transparencies/vis-a-vis
Student: Binder/pencil

Warm-Up:

1. TSW review the previous lesson by answering these questions,
 1. Write two equivalent fractions for the given fraction,
 1. $\frac{1}{2}$
 2. $\frac{2}{5}$
 3. $\frac{3}{4}$
 4. $\frac{5}{8}$

Set:

1. TTW have a student read the objective from the board.
2. TTW ask the students how long they think people have been reducing fractions. *About 2000 years ago.*
3. TTW explain that people in China came up with a method to reduce fractions a long, long time ago. *We will learn this method in class.*
4. TTW ask, why would people want to reduce fractions? *Smaller numbers are easier to work with.*

Procedure:

1. TTW explain the Chinese method for fractions with even numerators and denominators. **(Indicator 8)**
 1. Divide the numerator and denominator by two.
 2. Continue to divide until either the numerator or denominator is odd.
 3. TTW do an example: $112/200$
2. TTW explain that there is an easier method that works for any fraction.
3. TSW take notes on how to simplify fractions,
 1. Find the GCF of the numerator and denominator.
 2. Divide both the numerator and denominator by the GCF
 3. Examples:
 1. $12/15$
 2. $8/16$
 3. $21/28$
4. TSW start their homework assignment in class as the teacher walks around helping students

individually. Homework is Pg. 199 #30-42.

Closure:

1. TTW read the objective.
2. TTW review the lesson by asking questions. What are the two steps to reducing fractions.
3. TTW remind students to finish their homework.
4. TTW tell the students that tomorrow we will be comparing fractions.

Assessment:

Objective: *reduce* fractions to their simplest form.

Informal: TTW observe (M) as students work on their homework in class (C).

Formal: TTW collect the homework (M) on simplifying fraction (C), it will be graded and recorded in the grade book (D).

Homework – Day 7

Pg. 199 #30-42

State whether each fraction is in simplest form. If not, write it in simplest form.

30. $\frac{5}{8}$

31. $\frac{4}{6}$

32. $\frac{10}{35}$

33. $\frac{4}{5}$

34. $\frac{24}{56}$

35. $\frac{21}{77}$

36. $\frac{25}{150}$

37. $\frac{3}{50}$

38. $\frac{15}{135}$

39. $\frac{17}{51}$

40. $\frac{10}{65}$

41. $\frac{120}{150}$

42. What is the only common factor of the numerator and denominator when a fraction is written in simplest form?

Compare Fractions – Day 8

Name: Lisa Booth
Subject: 6th Grade Math

Approximate Time: 60 minutes

Objectives:

The Student Will...

1. *make* a fraction number line. (**Math 1.a; Synthesis**)
2. *compare* two or more fractions. (**Math 1.a; Analysis**)

Materials:

Teacher: Overhead/transparencies/vis-a-vis/strips of adding paper/fraction cards
Student: Binder/pencil

Warm-Up:

1. TSW review the previous lesson by answering these questions,
 1. Reduce the fractions to simplest form,
 1. $6/12$
 2. $5/15$
 3. $21/28$
 4. $36/40$
 2. TTW go over the problems with the students.

Set:

1. TTW ask the students if they had a choice would they rather have one half of a pie or one third of a pie? Why?
2. TTW tell the students that we will be learning about how to tell which fractions are larger than other fractions.

Procedure:

1. TSW make a fraction number line
 1. TTW hand out strips of adding paper.
 2. TTW have each student fold the paper in half. Label the crease $1/2$ because now the paper is divided into 2 parts and at the crease you have only traveled over 1 of the parts.
 3. TTW have the students fold the paper in half and in half again. Label the creases $1/4$, $2/4$, $3/4$ (explain why again). Also point out that $1/2$ and $2/4$ are equivalent because they are at the same point on the fraction number line.
 4. TTW have the students fold the paper in half three times. Label the creases $1/8$, $2/8$, $3/8$, $4/8$, etc. (explain why again).
 5. TTW have the students fold the paper into thirds (as best they can). Label the creases.
2. TTW ask the students what they notice about how the fractions are ordered. Do they see any sort of pattern?
 1. If the denominators are the same; the larger numerator is the bigger fraction.
 2. If the numerators are the same; the smaller denominator is the bigger fraction.
3. TTW have index cards with different fractions written on them. TSW each get a card. TTW

call them to the front of the room 2 or more at a time and have them arrange themselves in order from smallest to largest (may add some negative fractions) (**Indicator 15**)

4. TTW assign homework: Pg. 211 #1-10, #11 as extra credit, must explain! Remind students that can use simplifying, models, or the fraction number line we made to help answer the questions.

Closure:

1. TTW reask the pie question from the set, and students explain their answer. May ask the same question but with different fractions.
2. TTW ask the students what are the three methods that can help us compare fractions? *simplify the fractions, draw a model of the fractions, use a fraction number line.*

Assessment:

Objective: *make* a fraction number line.

Informal: TTW observe (M) as students make their fraction number lines (C).

Formal: TTW check (M) completed number lines (C), and record the completion grade in the grade book (D).

Objective: *compare* two or more fractions.

Informal: TTW observe (M) students as they order their fraction cards (C).

Formal: TTW assign homework from the text book (M) on comparing fractions (C), the homework will be collected, graded and recorded in the grade book (D).

Homework – Day 8

Pg. 211 #1-10

Compare using $<$, $>$, or $=$.

1. $\frac{11}{16}$ $\frac{13}{16}$
2. $\frac{13}{20}$ $\frac{1}{4}$
3. $\frac{9}{24}$ $\frac{3}{8}$
4. $\frac{15}{16}$ $\frac{9}{10}$
5. $\frac{4}{7}$ $\frac{5}{7}$
6. $\frac{3}{11}$ $\frac{1}{4}$
7. $\frac{1}{4}$ $\frac{1}{5}$
8. $\frac{2}{9}$ $\frac{4}{15}$

9. Timothy ran 1 and $\frac{3}{4}$ mi. Wenona ran 1 and $\frac{7}{10}$ mi. Who ran farther?
10. Two bags of popcorn sell for the same price. One bag contains 1 and $\frac{5}{8}$ oz. The other contains 1 and $\frac{3}{4}$ oz. Which has more?
11. To compare $\frac{9}{24}$ and $\frac{5}{15}$, which would you do first? Explain.
 1. Find the LCM of 24 and 15.
 2. Simplify each fraction.
 3. Find the prime factorization of 24 and 15.
 4. Multiply 24×15 to find a common denominator.

Improper Fractions and Mixed Numbers – Day 9

Name: Lisa Booth
Subject: 6th Grade Math

Approximate Time: 60 minutes

Objectives:

The Student Will...

1. convert between improper fractions and mixed numbers. (**Math 1.d; Comprehension**)
2. explain why the denominator stays the same. (**Math 1.a, 1.d; Comprehension**)

Materials:

Teacher: Overhead/transparencies/vis-a-vis/fraction pieces

Student: Binder/pencil/construction paper/glue/markers/crayons

Warm-Up:

1. TSW review the previous lesson by answering these questions,
 1. Put the correct symbol between the two fractions, <, >, or =.
 1. $\frac{1}{2}$ $\frac{1}{5}$
 2. $\frac{4}{9}$ $\frac{7}{9}$
 3. $\frac{1}{3}$ $\frac{3}{8}$
 4. $\frac{3}{5}$ $\frac{6}{10}$

Set:

1. TTW have a student read the objective from the board.
2. TTW hand out quarter circles to each student (at least 8 pieces for each student).
3. TTW have the student represent $\frac{3}{4}$ using their pieces. Then TTW have the student add 2 more pieces, so add $\frac{2}{4}$ to the $\frac{3}{4}$.
4. TTW ask the students to tell what fraction is represented now by the pieces. (The students may give either the improper fraction or mixed number.)

Procedure:

1. TTW hand out quarter circles to each student (at least 8 pieces for each student).
2. TTW have the student represent $\frac{3}{4}$ using their pieces. Then TTW have the student add 2 more pieces, so add $\frac{2}{4}$ to the $\frac{3}{4}$.
3. TTW ask the students to tell what fraction is represented now by the pieces. (The students may give either the improper fraction or mixed number.)
4. TSW convert the improper fraction to a mixed number or vice versa. $1 \frac{1}{4} = \frac{5}{4}$
5. TTW explain how you can convert,
 1. $\frac{5}{4}$: 5 divided by 4 is 1 R1 or 1 and $\frac{1}{4}$
 2. $1 \frac{1}{4}$: 1 times 4 is 4, plus 1 is 5 the new numerator, so the fraction is $\frac{5}{4}$.
6. Have students work in groups to make posters showing pictures of mixed number/improper fractions and how to convert from one to the other. Construction paper, glue, scissors, markers, colored pencils, and crayons will be provided by the teacher. Posters will be displayed in the hall. *A sample poster will be provided by the teacher. (Indicator 15)*
7. Each group will get a packet of fraction pieces to glue on their posters.

Closure:

1. TTW read the objective.
2. TSW volunteer to show their posters.
3. TTW explain that we will be reviewing for a unit test tomorrow by playing a quiz game.

Assessment:

Objective: *convert* between improper fractions and mixed numbers.

Informal: TTW observe (M) as students create their posters (C).

Formal: TTW collect the posters (M) and grade them for correct conversions (C). The grade will be recorded in the grade book (D).

Objective: *explain* why the denominator stays the same.

Informal: TTW observe (M) as students create their posters (C).

Formal: TSW take a unit test (M) that will cover denominator rules (C). The test will be graded and recorded in the grade book (D).

Poster – Day 9

Improper Fraction and Mixed Number Poster Rubric

Each picture is worth 5 points.

Glued on the fraction pieces (1 point)

Gave the correct Improper fraction (1 point)

Gave the correct Mixed number (1 point)

Showed their conversion work (1 point)

Neatness (1 point)

Poster is worth a total of 15 points.

Quiz Show Review – Day 10

Name: Lisa Booth
Subject: 6th Grade Math

Approximate Time: 60 minutes

Objectives:

The Student Will...

1. *list* the factors of a number. (**Math 1.c; Knowledge**)
2. *define* prime and composite numbers. (**Math 1.c; Knowledge**)
3. *write* fractions from word problems. (**Math 1.a; Comprehension**)
4. *draw* models of fractions. (**Math 1.a; Application**)
5. *write* two equivalent fractions for a given fraction. (**Math 1.a; Application**)
6. *reduce* fractions to their simplest form. (**Math 1.a; Comprehension**)
7. *compare* two or more fractions. (**Math 1.a; Analysis**)
8. *convert* between improper fractions and mixed numbers. (**Math 1.d; Comprehension**)

Materials:

Teacher: Binder/Binder Rubric/Review Questions/Score card

Student: Binder/pencil/individual whiteboard/marker

Do-Now:

1. TTW go through the class binder with the students.
2. TSW organize their binders as the teacher goes through the class binder.

Set:

1. TTW ask the students if they have ever watched quiz shows.
2. TTW explain the rules of “Ms. Booth’s Brain Bonanza”
 1. Class is divided into teams of two or three (Desks 1-3 are a group, 4-6 are a group, etc.).
 2. Each group gets a small whiteboard and marker.
 3. TTW read a question.
 4. TSW have 1 to 2 minutes (based on the question) to write an answer on their whiteboard.
The groups may discuss answers, but they don’t want the other groups to hear.
 5. When time is called TSW hold up their boards.
 6. TTW determine which answers are correct and record the score. (As a bonus, someone can explain how they got their answer.)

Procedure:

1. Have students get into their groups.
 1. Show students how to get into groups.
 2. All desks that are multiples of 3 (3, 6, 9, 12, 15, 18, 21, 24) stay put.
 3. The two desks in front of the multiples of three turn toward each other to form a group of 3.
2. Hand out the whiteboards and markers.
3. Start the game. (Follow rules given in set)
4. Winning team gets 2 cookies each
5. End with 7 minutes left in class.
 1. Collect the whiteboards and markers

2. Have students put their desks back.

Closure:

1. TTW ask the students what we reviewed today. What do you understand better, what still needs work?
2. TTW restate the objective.
3. TTW remind the students that there will be a unit test covering this material.
4. TTW preview the next lesson. Next we will be learning how to add and subtract fractions.

Assessment:

For all objectives,

Informal: TTW listen and observe (M) as students answer the review questions (C).

Formal: TTW give a unit test (M) the next day covering what was reviewed (C). The tests will be graded and recorded in the grade book (D).