

Objectives:

- Students will memorize the multiplication table, as evidenced by them passing “minute quizzes.”
- Students will find the prime factorization of whole numbers, as evidenced by them completing a warm-up worksheet where they do so.
- Students will find the least common multiple of whole numbers, as evidenced by them completing a homework assignment where they do so.

Student Materials on Desk Corner:

- Homework #2-25
- Homework Checker
- Readiness Checker

Student Materials for Class:

- Homework Log
- Binder Paper
- Pencils

Teacher Materials:

- “Warm-up 2-26” for each student
- “Minute Quiz 2-26” for each student
- “Homework #2-25” answer key and grading roster for TA
- “Homework #2-26” handout for each student

Homework:

- Finish Homework #2-26
- ALEKS

Time	Activity
10 min	<p style="text-align: center;">MINUTE QUIZ, WARM-UP, HOMEWORK COLLECTION, AND ATTENDANCE</p> <p>Minute Quiz and Warm-up When the bell rings, quickly go around and put the minute quiz on each student’s desk, facedown. Then, start everyone on the quiz at the same time and give everyone one minute. While students are working on the quiz, pass out the warm-ups so that students can work on them once they’re done with the minute quiz. Also, stamp the readiness checkers of students who were ready when the bell rang and had their readiness checkers out.</p> <p>Homework Collection and Attendance Instruct the TA go around and collect homework and stamp homework checkers. Give the TA the answer key and have him or her grade the homework that was collected. During this time, take attendance.</p> <p>Warm-up & Notes Checker Once all the homework is collected, go around and stamp the students’ “Warm-up and Notes Checkers.”</p>
30 min	<p style="text-align: center;">LESSON: LEAST COMMON MULTIPLE</p> <p>Notes Follow the handwritten Cornell Notes. Once students are finished, go around and stamp the students’ “Warm-up and Notes Checkers.”</p>
15 min	<p style="text-align: center;">CLASSWORK</p> <p>Pass out the homework/classwork handout and have students write down the assignment on their homework logs. Have the TA pass out fraction circles and write own which student has which set of fraction circles. Students should use the fraction circles to complete Homework #2-26, which will serve as the classwork.</p>
25 min	<p style="text-align: center;">ALEKS</p> <p>When students finish their classwork, they should continue with ALEKS. Use this student work time to return graded homework.</p>

Solve the following multiplication problems. You have exactly one minute!

$4 \cdot 12 =$

$8 \cdot 12 =$

$10 \cdot 10 =$

$7 \cdot 3 =$

$6 \cdot 4 =$

$1 \cdot 7 =$

$4 \cdot 5 =$

$12 \cdot 12 =$

$11 \cdot 2 =$

$4 \cdot 8 =$

$7 \cdot 5 =$

$12 \cdot 4 =$

Solve the following multiplication problems. You have exactly one minute!

$4 \cdot 12 =$

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$4 \cdot 12 =$

$8 \cdot 12 =$

$10 \cdot 10 =$

$7 \cdot 3 =$

$6 \cdot 4 =$

$1 \cdot 7 =$

$4 \cdot 5 =$

$12 \cdot 12 =$

$11 \cdot 2 =$

$4 \cdot 8 =$

$7 \cdot 5 =$

$12 \cdot 4 =$

Solve the following multiplication problems. You have exactly one minute!

$11 \cdot 10 =$

$7 \cdot 4 =$

$10 \cdot 3 =$

$5 \cdot 3 =$

$2 \cdot 7 =$

$4 \cdot 12 =$

$7 \cdot 7 =$

$2 \cdot 2 =$

$4 \cdot 8 =$

$4 \cdot 5 =$

$10 \cdot 4 =$

$9 \cdot 3 =$

Solve the following multiplication problems. You have exactly one minute!

$11 \cdot 10 =$

$7 \cdot 4 =$

$10 \cdot 3 =$

$5 \cdot 3 =$

$2 \cdot 7 =$

$4 \cdot 12 =$

$7 \cdot 7 =$

$2 \cdot 2 =$

$4 \cdot 8 =$

$4 \cdot 5 =$

$10 \cdot 4 =$

$9 \cdot 3 =$

Solve the following multiplication problems. You have exactly one minute!

$11 \cdot 10 =$

$7 \cdot 4 =$

$10 \cdot 3 =$

$5 \cdot 3 =$

$2 \cdot 7 =$

$4 \cdot 12 =$

$7 \cdot 7 =$

$2 \cdot 2 =$

$4 \cdot 8 =$

$4 \cdot 5 =$

$10 \cdot 4 =$

$9 \cdot 3 =$

Solve the following multiplication problems. You have exactly one minute!

$4 \cdot 3 =$

$9 \cdot 3 =$

$9 \cdot 8 =$

$1 \cdot 10 =$

$8 \cdot 7 =$

$4 \cdot 3 =$

$2 \cdot 4 =$

$1 \cdot 10 =$

$7 \cdot 11 =$

$8 \cdot 4 =$

$7 \cdot 1 =$

$12 \cdot 10 =$

Solve the following multiplication problems. You have exactly one minute!

$4 \cdot 3 =$

$9 \cdot 3 =$

$9 \cdot 8 =$

$1 \cdot 10 =$

$8 \cdot 7 =$

$4 \cdot 3 =$

$2 \cdot 4 =$

$1 \cdot 10 =$

$7 \cdot 11 =$

$8 \cdot 4 =$

$7 \cdot 1 =$

$12 \cdot 10 =$

Solve the following multiplication problems. You have exactly one minute!

$4 \cdot 3 =$

$9 \cdot 3 =$

$9 \cdot 8 =$

$1 \cdot 10 =$

$8 \cdot 7 =$

$4 \cdot 3 =$

$2 \cdot 4 =$

$1 \cdot 10 =$

$7 \cdot 11 =$

$8 \cdot 4 =$

$7 \cdot 1 =$

$12 \cdot 10 =$

Find the prime factorization of the following whole numbers.

1) 20

2) 24

3) 50

4) 75

5) 81

6) 100

Find the prime factorization of the following whole numbers.

1) 20

2) 24

3) 50

4) 75

5) 81

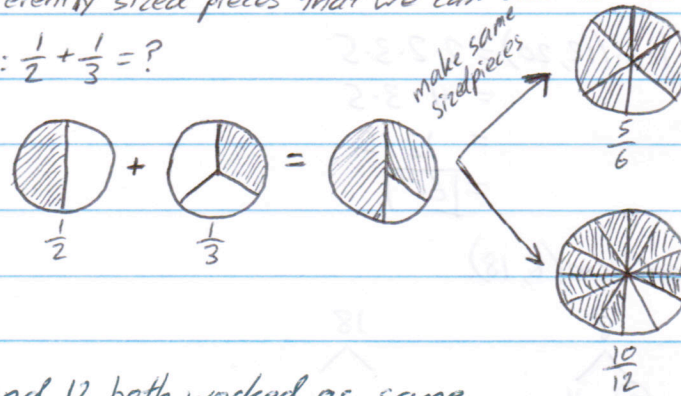
6) 100

Least Common Multiple

Section → Introduction

When adding fractions with differing denominators, there are many differently sized pieces that we can use to make same sized pieces.

Ex: $\frac{1}{2} + \frac{1}{3} = ?$



6 and 12 both worked as same sized pieces because 6 and 12 are common multiples of 2 and 3.

Multiples of 2: 2, 4, 6, 8, 10, 12, 14, 16, 18, ...

Multiples of 3: 3, 6, 9, 12, 15, 18, ...

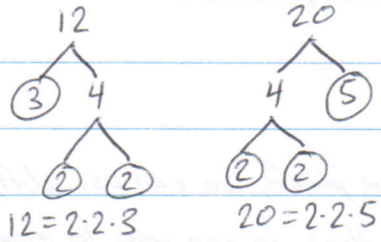
Of course, we want to pick the smallest common multiple because small numbers are easier to use than big numbers.

So, we want to use the least common multiple (lcm).

Section → Least Common Multiple

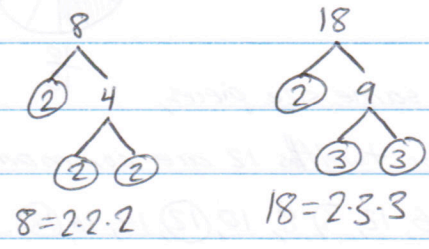
To find the least common multiple of two numbers, first find the prime factorization of both numbers. Then, multiply together the greatest number of each prime number.

Ex: Find lcm(12, 20).



$$\begin{aligned}
 \text{lcm}(12, 20) &= 2 \cdot 2 \cdot 3 \cdot 5 \\
 &= 4 \cdot 3 \cdot 5 \\
 &= 12 \cdot 5 \\
 &= \boxed{60}
 \end{aligned}$$

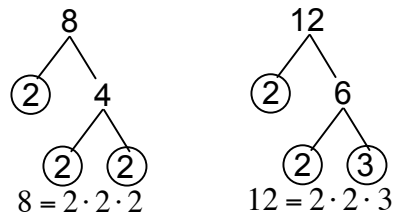
Ex: Find $\text{lcm}(8, 18)$.



$$\begin{aligned}
 \text{lcm}(8, 18) &= 2 \cdot 2 \cdot 2 \cdot 3 \cdot 3 \\
 &= 4 \cdot 2 \cdot 3 \cdot 3 \\
 &= 8 \cdot 3 \cdot 3 \\
 &= 24 \cdot 3 \\
 &= \boxed{72}
 \end{aligned}$$

Find the least common multiple of the following pairs of whole numbers:

Ex.) 8 and 12



$$\text{lcm}(8,12) = 2 \cdot 2 \cdot 2 \cdot 3 = 24$$

1) 4 and 6

2) 3 and 5

3) 4 and 10

4) 2 and 3

5) 3 and 4

6) 7 and 14

7) 8 and 6

8) 3 and 6

9) 12 and 18

10) 4 and 7

11) 12 and 15

12) 9 and 12

13) 5 and 7

14) 8 and 10

15) 8 and 14