

Math News

5th Grade Unit 1 & Unit 7: Number Puzzles, Multiple Towers & How Many People? How Many Teams?

Issue #1 of 5 – 1st 9 Weeks

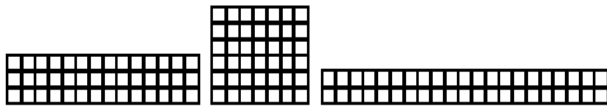
Our Learning Goals:

- Use a variety of efficient strategies to solve multiplication and division problems
- Identify prime and composite numbers by listing the factors of the number
- Describe the meaning of parentheses and brackets and use them to simplify expressions

Prime and Composite Numbers

In the first unit, students will be working to use their understanding of multiplication to identify prime and composite numbers. Students use arrays to think about how many factors each number has. If the number can be built into more than one array, it has more than 2 factors. This is a composite number.

42 is a Composite Number



$$3 \times 14$$

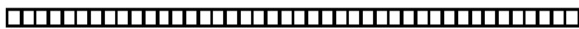
or 14×3

$$6 \times 7$$

or 7×6

$$2 \times 21$$

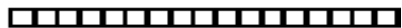
or 21×2



$$1 \times 42 \text{ or } 42 \times 1$$

The factors of 42 (in order) are: 1, 2, 3, 6, 7, 14, 21, 42.

17 is a Prime Number



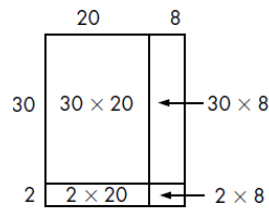
The factors for 17 are: 1, 17

Remember: 1
is not prime or
composite

Multiplication

To prepare for the standard U.S. algorithm, the partial product strategy is used by many fifth graders. This strategy emphasizes place value and multiples of ten as well as builds an understanding of how the distributive property works.

Partial Products



$$30 \times 20 = 600$$

$$30 \times 8 = 240$$

$$2 \times 20 = 40$$

$$2 \times 8 = 16$$

$$32 \times 28 = 896$$

$$32$$

$$\times 28$$

$$16$$

$$240$$

$$40$$

$$\underline{600}$$

$$896$$

How Will My Child be Assessed?

Students will be assessed informally and formally throughout the unit with opportunities to learn from their peers and their own mistakes. An assessment will be given at the end of the unit with both open ended and multiple choice questions.

Students will also be tested to determine the basic facts each student “Knows” and which facts they are “Still Working On.” Students will be encouraged to think of “Clues” to help them remember a strategy for each fact they are “Still Working On.”

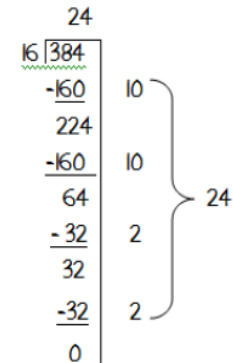
Division with and without Remainders

Students will use what they know about multiplication to help them solve division problems. This connection can be seen when division and multiplication situations are presented simultaneously in story contexts. The story contexts help students make sense of the problem and interpret what the remainder really means in the context of the story.

There were 384 seats in the movie theatre. Each row has 16 seats. How many rows are in the movie theatre?

Show your thinking using:

Partial Quotients



Equations

$$16 \times 20 = 320$$

$$16 \times 2 = 32$$

$$\underline{16 \times 2 = 32}$$

$$16 \times 24 = 384$$

Arrays

