

Activity 22 Assessment

Fluency with Multiplication and Division Consolidation

Determining Multiples and Factors

Uses skip-counting or repeated addition to find multiples

4, 8, 12, 16, 20, ...

"To find multiples of 4, I skip counted by 4."

Uses familiar basic facts to identify some multiples and factors

$$2 \times 4 = 8$$

$$3 \times 4 = 12$$

$$10 \times 4 = 40$$

"I thought of the multiplication facts for 4 that I know."

Uses efficient strategies to determine multiples and identify all factors

"To find factors of 8, I start

$$8 \div 1 = 8$$

Factors are 1 and 8.

$$8 \div 2 = 4$$

Factors are 2 and 4.

$$8 \div 3 = X$$

$$8 \div 4 = 2$$

So, 1, 2, 4, and 8 are all factors."

Observations/Documentation

Activity 22 Assessment

Fluency with Multiplication and Division Consolidation

Determining Multiples and Factors (cont'd)

Uses concrete materials to identify prime and composite numbers



"7 is prime because it has only 2 factors, 1 and 7.
12 is composite because it has more than 2 factors: 1 and 12, 2 and 6, and 3 and 4."

Identifies common multiples/factors and greatest common factor for a pair of numbers

Factors of 24: 1, 2, 3, 4, 6, 8, 12, 24
Factors of 56: 1, 2, 4, 7, 8, 14, 28, 56

"The greatest common factor is 8."

Solves problems involving common factors and multiples

"Choir practice is every 5th day.
Gymnastics is every 3rd day.
That means choir and gymnastics both happen every 15th day."

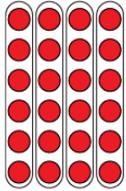
Observations/Documentation

Activity 22 Assessment

Fluency with Multiplication and Division Consolidation

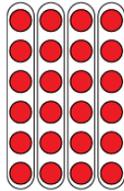
Fluency of Multiplication and Division Facts

Recalls and demonstrates multiplication and divisions facts to 5×5



"I know that $4 \times 6 = 24$
and that $24 \div 6 = 4$.
The array shows both facts."

Uses inverse operations to solve multiplication and division problems



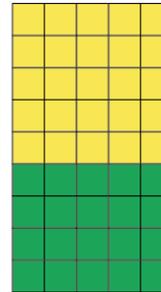
"I can rewrite $24 \div 6 = ?$
as $6 \times ? = 24$."

Uses known facts to determine unknown facts

"I can use the distributive property to split the multiplication into facts that I know, then add."

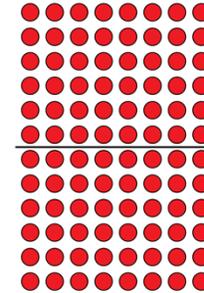
$$5 \times 9 = \underline{5 \times 5} + \underline{5 \times 4}$$

$$25 + 20 = 45$$



Fluently creates and solves whole number multiplication problems with factors to 12 and related division problems

There are 96 basketballs with the same number on each of 12 shelves.



$$12 \times \square = 96, \text{ so } 96 \div 12 = \square$$

$$12 \times 8 = 96$$

Or

$$12 \times 8 = 6 \times 8 + 6 \times 8$$

$$= 48 + 48$$

$$= 96$$

Observations/Documentation