Conceptual Meaning of Multiplication and Division with Larger Numbers

Models multiplication and division situations concretely and pictorially	Models multiplication and division situations using an open array	Uses place value to multiply and divide natural numbers by 10, 100, and 1000
$6 \times 287 = ?$ 6 × 200 = 1200 6 × 80 = 480 6 × 7 = 42 "100, 200, ..., 1100, 1200" 1200 + 480 + 42 = 1722 "I traded groups of 10 rods for a flat."	$6 \times 287 = ?$ "I can use an open array to help me multiply."	$34 \times 200 = 34 \times 2 \times 100$ $\qquad\qquad = 68 \times 100$ $\qquad\qquad = 6800$ "I used the associative property to make friendly numbers."
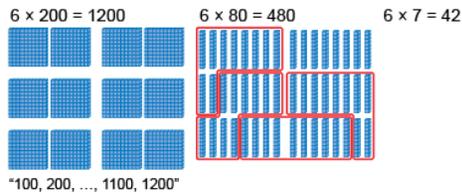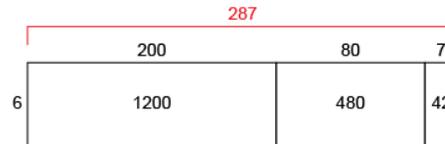
Observations/Documentation

Activity 28 Assessment
Consolidating Multiplying and Dividing Larger Numbers

Conceptual Meaning of Multiplication and Division with Larger Numbers (cont'd)

Decomposes numbers and uses standard algorithm to multiply and divide	Estimates to determine if answer to multiplication or division problem is reasonable	Creates and solves multiplication and division problems flexibly using a variety of strategies
$6 \times 287 = ?$ $\overset{5\ 4}{287}$ $\times\ \ \ 6$ $\overline{1722}$ "I used the standard algorithm to multiply the numbers."	$6 \times 287 = 1722$ 287 is close to 300. $6 \times 300 = 1800$ "1800 is close to the answer I calculate, 1722. So, my answer is reasonable."	$123 \div 6 = ?$ "I counted 123 photographs to put in an album. Each page can hold 6 photographs. How many pages will I need?" $6 \overline{)123} ^{20\ R3}$ $\underline{120}$ 3 "I round up to 21 pages to be sure all photos will fit."

Observations/Documentation

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