Activity 16 Assessment Investigating Divisibility Tests

Multiplying and Dividing Larger Numbers

Uses divisibility tests to identify numbers that are divisible by 2, 3, and 5.

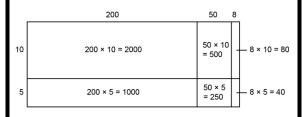
285

"Not divisible by 2 as the ones digit is not even. Divisible by 3 because the sum of the digits, 15, is divisible by 3.

Divisible by 5 as the ones digit is 5."

Models multiplication and division situations concretely and pictorially (i.e., using Base Ten Blocks, arrays, open arrays)

 $258 \times 15 = ?$



"I used an open array and added all the areas: 2000 + 1000 + 500 + 250 + 80 + 40 = 3870. So, $258 \times 15 = 3870$."

Uses standard algorithms to multiply and divide

$$258 \times 15 = ?$$

258 × 15

Multiply: 258 × 5 1290 Multiply: 258 × 10 +2580

 $\frac{10 \times 10 + 2580}{3870}$

"I used the standard algorithm to multiply."

Observations/Documentation

Activity 16 Assessment Investigating Divisibility Tests

Multiplying and Dividing Larger Numbers (cont'd)

Estimates to determine if answer to multiplication or division problem is reasonable

$$258 \times 15 = 3870$$

"258 is close to 250. $250 \times 15 = (250 \times 10) + (250 \times 5)$ = 2500 + 1250 = 37503870 is close to 3750. So, my answer is reasonable." Expresses a quotient with or without a remainder according to context

There are 114 students going on field trip.
Each bus holds 9 students.
How many buses are needed?

 $114 \div 9 = 12 \text{ R6}$ "Since 6 students cannot be left behind, 13 buses are needed."

Creates and solves multiplication and division problems flexibly using a variety of strategies

5 elephants share 748 kg of food. How much food does each elephant get?

748 ÷ 5 =
$$(500 \div 5) + (200 \div 5) + (45 \div 5) + (3 \div 5)$$

= 100 + 40 + 9 + $(3 \div 5)$
= 149 R3, or $149\frac{3}{5}$ or $149\frac{6}{10}$, or 149.6
Each elephant got 149.6 kg of food.

Observations/Documentation