## **Activity 17 Assessment**

### **Using Estimation for Multiplication and Division**

### **Multiplying and Dividing Larger Numbers**

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

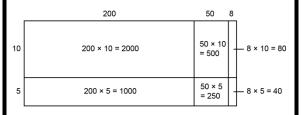
285

"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 × 15 = 3870."

Uses standard algorithms to multiply and divide

$$258 \times 15 = ?$$

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

3870 +2580 3870

"I used the standard algorithm to multiply."

### **Observations/Documentation**

# **Activity 17 Assessment**

### **Using Estimation for Multiplication and Division**

#### **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**