

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

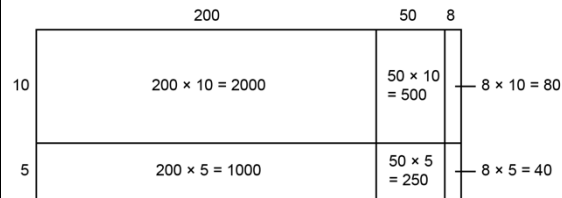
“Not divisible by 2 as the ones digit is not even.
Divisible by 3 because the sum of the digits, 15,
is divisible by 3.

Divisible by 5 as the ones digit is 5.”

(« Non divisible par 2 car le chiffre des unités
n'est pas pair. Divisible par 3 car la somme des
chiffres, 15, est divisible par 3. Divisible par 5 car
le chiffre des unités est 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, $258 \times 15 = 3870$.”

(« J'ai utilisé une matrice ouverte et additionné
toutes les sections. »)

Uses standard algorithms to multiply and divide

$$258 \times 15 = ?$$

$$\begin{array}{r}
 28 \\
 \times 15 \\
 \hline
 1290 \\
 + 2580 \\
 \hline
 3870
 \end{array}$$

Multiply: $258 \times 5 = 1290$
 Multiply: $258 \times 10 = 2580$
3870

“I used the standard algorithm to multiply.”
(« J'ai utilisé l'algorithme usuel pour multiplier. »)

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.

$$\begin{aligned} 250 \times 15 &= (250 \times 10) + (250 \times 5) \\ &= 2500 + 1250 \\ &= 3750 \end{aligned}$$

3870 is close to 3750.

So, my answer is reasonable."

(« 258 est proche de 250.

$$\begin{aligned} 250 \times 15 &= (250 \times 10) + (250 \times 5) \\ &= 2\,500 + 1\,250 \\ &= 3\,750 \end{aligned}$$

3 870 est proche de 3750.

Donc, ma réponse est vraisemblable. »)

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?

$$\begin{array}{r} 12 \\ 9 \overline{) 114} \\ \underline{- 9} \\ 24 \\ \underline{- 18} \\ 6 \end{array}$$

$$114 \div 9 = 12 \text{ R}6$$

"Since 6 students cannot be left behind, 13 buses are needed."

(« Puisque 6 élèves ne peuvent pas être laissés derrière, il faut 13 autobus. »)

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?

$$\begin{aligned} 748 \div 5 &= (500 \div 5) + (200 \div 5) + (45 \div 5) + (3 \div 5) \\ &= 100 + 40 + 9 + (3 \div 5) \\ &= 149 \text{ R}3, \text{ or } 149\frac{3}{5} \text{ or } 149\frac{6}{10}, \text{ or } 149.6 \end{aligned}$$

Each elephant got 149.6 kg of food.

(« Chaque éléphant a obtenu 149,6 kg de nourriture. »)

Observations/Documentation