

Activity 20 Assessment Consolidation

Multiplying and Dividing Larger Numbers

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

285

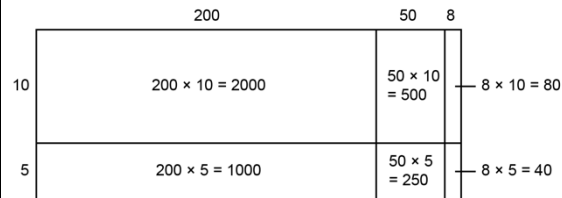
“Not divisible by 2 as the ones digit is not even. Divisible by 3 because the sum of the digits, 15, is divisible by 3.

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

$$258 \times 15 = ?$$

$$\begin{array}{r}
 \overset{2}{} \overset{4}{} \\
 258 \\
 \times 15 \\
 \hline
 1290 \\
 +2580 \\
 \hline
 3870
 \end{array}$$

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 20 Assessment Consolidation

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