Unit 4, Lesson 3

Partial Products in Algorithms

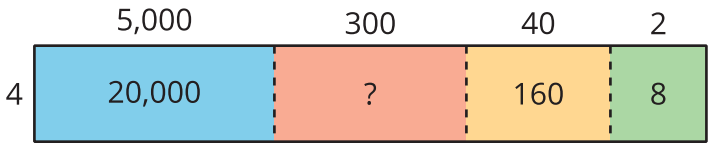
Let's find partial products.

Warm-up

Which Three Go Together: Multiplying Large Numbers

Which 3 go together?

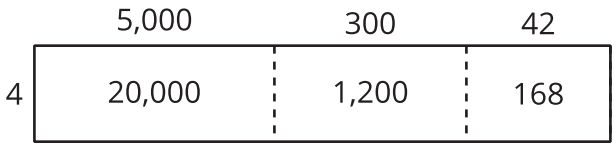
A



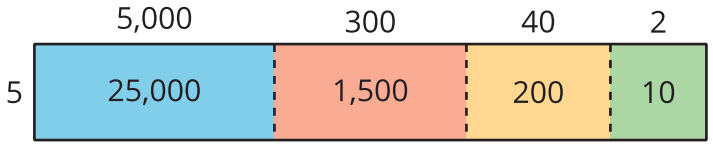
B

$(4 \times 5,000) + (4 \times 300) + (4 \times 40) + (4 \times 2)$

C

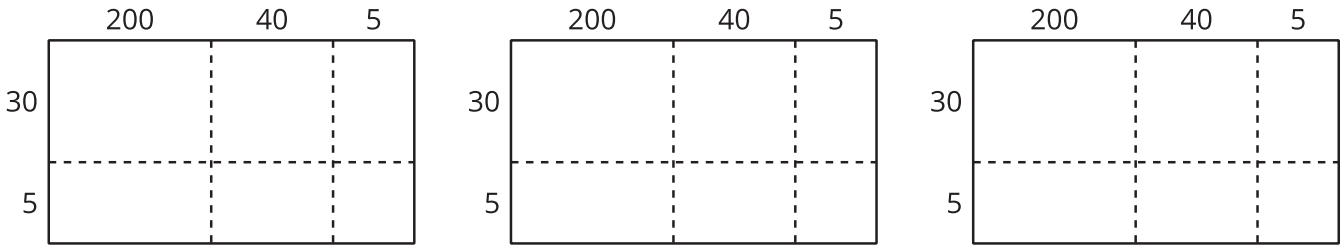


D



Activity 1

Partial Products Everywhere



1. Take turns. Choose a set of expressions that when added together have the same value as 245×35. Use the diagrams if they are helpful.

2. Explain how you know the sum of your expressions has the same value as 245×35.

3. What is the value of 245×35? Explain or show your reasoning.

Activity 2

Record Partial Products

Andre

$$\begin{array}{r} 245 \\ \times\ 35 \\ \hline 6,000 \\ 1,200 \\ 150 \\ 1,000 \\ 200 \\ +\ 25 \\ \hline 8,575 \end{array}$$

Clare

$$\begin{array}{r} 245 \\ \times\ 35 \\ \hline 25 \\ 200 \\ 1,000 \\ 150 \\ 1,200 \\ +\ 6,000 \\ \hline 8,575 \end{array}$$

1. How are Andre's and Clare's strategies alike? How are they different?

2. Create a list of equations that represent the partial products Andre and Clare found.