



A Partial-Quotients Algorithm

Let's make sense of a partial-quotients algorithm.

Warm-up

Notice and Wonder: Incomplete Solution

What do you notice? What do you wonder?

$$\begin{array}{r} 20 \\ 16 \overline{)448} \\ \underline{-320} \quad (20 \times 16) \\ 128 \\ \underline{0} \quad (5 \times 16) \end{array}$$



Activity 1

Elena's Work

1. Find the value of $448 \div 16$. Show your thinking. Organize it so it can be followed by others.

(Pause for teacher directions.)

2. Describe Elena's strategy for finding the value of $448 \div 16$.

$$\begin{array}{r} \boxed{28} \\ 3 \\ 5 \\ 20 \\ 16 \overline{)448} \\ \underline{-320} \quad (20 \times 16) \\ 128 \\ \underline{-80} \quad (5 \times 16) \\ 48 \\ \underline{-48} \quad (3 \times 16) \\ 0 \end{array}$$

Activity 2

Complete the Solution

Use Elena's strategy to complete solving these expressions.

1.

$$\begin{array}{r}
 20 \\
 20 \\
 12 \overline{)492} \\
 \underline{-240} \quad (20 \times 12) \\
 252 \\
 \underline{-240} \quad (20 \times 12)
 \end{array}$$

2.

$$\begin{array}{r}
 40 \\
 15 \overline{)630}
 \end{array}
 \quad (40 \times 15)$$

3.

$$14 \overline{)368}$$

