



# 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?

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



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  $448 \div 16$ .

28

3

5

20

16)448

-320 (20 × 16)

128

- 80 (5 × 16)

48

- 48 (3 × 16)

0



## 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.

$$14 \overline{)368}$$