



Different Partial Quotients

Let's use what we know about multiplication and place value to find quotients.

Warm-up

Notice and Wonder: Ways to Record

What do you notice? What do you wonder?

Clare's strategy

$$\begin{array}{rcl}
 & & 364 \div 13 \\
 13 \times 10 & = & 130 \\
 13 \times 20 & = & 260 \\
 13 \times 5 & = & 65 \\
 13 \times 3 & = & 39 \\
 \hline
 & & 364 \\
 & - & 260 \\
 \hline
 & & 104 \\
 & - & 65 \\
 \hline
 & & 39 \\
 & - & 39 \\
 \hline
 & & 0
 \end{array}$$

Jada's strategy

$$\begin{array}{rcl}
 130 \div 13 & = & 10 \\
 130 \div 13 & = & 10 \\
 65 \div 13 & = & 5 \\
 39 \div 13 & = & 3 \\
 \hline
 364 \div 13 & = & 28
 \end{array}$$

Activity 1

Division Expressions

Take turns:

1. Choose a set of expressions that when added together have the same value as $308 \div 14$. Not all expressions will be used.
2. Explain to your partner how you know that your cards represent a sum that has the same value as $308 \div 14$.

(Pause for teacher directions.)

3. Choose one of the sets of expressions. Use it to find the value of $308 \div 14$.

Activity 2

Choose Your Own Partial Quotients

Choose one of the partial-quotients for each expression. Use this partial quotient to begin finding the value of the quotient.

1. $360 \div 15$

- $150 \div 15$
- $300 \div 15$
- $60 \div 15$

2. $945 \div 45$

- $45 \div 45$
- $450 \div 45$
- $900 \div 45$

3. $992 \div 31$

- $62 \div 31$
- $341 \div 31$
- $310 \div 31$

4. How did you decide which partial quotient to use to begin finding the quotient? Did you change your mind and begin with a different partial quotient? Explain or show your reasoning.

