Lesson 14: Situations Involving Factors and Multiples

- Let's interpret and solve division problems beyond 100.

Warm-up: Number Talk: Dividing by 7

Find the value of each expression mentally.
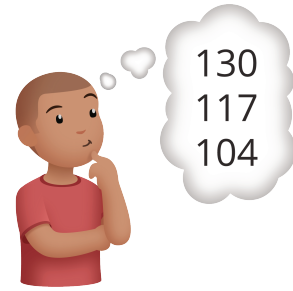
- $21 \div 7$

- $35 \div 7$

- $140 \div 7$

- $196 \div 7$

14.1: Write Multiples

1. Han starts writing multiples of a number. When he reaches 104, he has written 8 numbers.

   For each of the following questions, show your reasoning.

   130
   117
   104

   a. What number is Han writing multiples of?

   b. What is the 15th multiple of this number?

   c. Han gets to 286. How many numbers has he written at that point?

2. Kiran wants to know how many multiples of 7 are between 0 and 150.

   a. He thinks he can use division to find out. Do you agree? Explain your reasoning.

   _____

   _____

   _____

   _____

   b. How many multiples will he find? Show your reasoning.

   c. Is 150 a multiple of 7? Show how you know.

14.2: Jada's Mystery Number

Jada is writing multiples of a mystery number. After writing a bunch of numbers, she writes out 126.

- Mai says 6 is the mystery number.

- Priya says 8 is the mystery number.

- Andre says 9 could be the mystery number.

1. Which student do you agree with? Show your reasoning and include equations.

2. Jada gives one more clue: "If I keep writing multiples, I'll get to 153."

   What is the mystery number? Explain or show your reasoning.