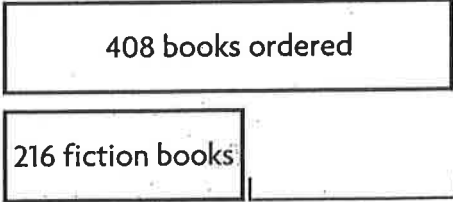


Lesson Objective: Use the strategy *draw a diagram* to solve multistep multiplication problems.

Name _____

Problem Solving • Multiply 2-Digit Numbers

A library ordered 17 cases with 24 books in each case. In 12 of the cases, 18 books were fiction books. The rest of the books were nonfiction. How many nonfiction books did the library order?

Read the Problem	Solve the Problem
<p>What do I need to find?</p> <p>I need to find <u>how many nonfiction books</u> were ordered.</p>	<ul style="list-style-type: none"> • First, find the total number of books ordered. $\underline{17} \times \underline{24} = \underline{408}$ books ordered • Next, find the number of fiction books. $\underline{12} \times \underline{18} = \underline{216}$ fiction books
<p>What information do I need to use?</p> <p><u>17</u> cases of <u>24</u> books each were ordered.</p> <p>In <u>12</u> cases, <u>18</u> books were fiction books.</p>	<ul style="list-style-type: none"> • Last, draw a bar model. I need to subtract. <div style="text-align: center;">  </div>
<p>How will I use the information?</p> <p>I can find the <u>total number of books ordered</u> and the <u>number of fiction books ordered</u>.</p> <p>Then I can draw a bar model to compare the <u>total number of books</u> to the <u>number of fiction books</u>.</p>	<p>$408 - 216 = \underline{192}$</p> <p>So, the library ordered <u>192</u> nonfiction books.</p>

1. A grocer ordered 32 cases with 28 small cans of fruit in each case. The grocer also ordered 24 cases with 18 large cans of fruit in each case. How many more small cans of fruit did the grocer order?

2. Rebecca rode her bike 16 miles each day for 30 days. Michael rode his bike 25 miles for 28 days. Who rode farther? How much farther?

Name _____

Problem Solving • Multiply 2-Digit Numbers

Solve each problem. Use a bar model to help.

1. Mason counted an average of 18 birds at his bird feeder each day for 20 days. Gloria counted an average of 21 birds at her bird feeder each day for 16 days. How many more birds did Mason count at his feeder than Gloria counted at hers?

360 birds counted by Mason

336 birds counted by Gloria

?

Birds counted by Mason: $18 \times 20 = 360$ Birds counted by Gloria: $21 \times 16 = 336$

Draw a bar model to compare.

Subtract. $360 - 336 = 24$ So, Mason counted 24 more birds.

2. The 24 students in Ms. Lee's class each collected an average of 18 cans for recycling. The 21 students in Mr. Galvez's class each collected an average of 25 cans for recycling. How many more cans were collected by Mr. Galvez's class than Ms. Lee's class?

3. At East School, each of the 45 classrooms has an average of 22 students. At West School, each of the 42 classrooms has an average of 23 students. How many more students are at East School than at West School?

4. A zoo gift shop orders 18 boxes of 75 key rings each and 15 boxes of 80 refrigerator magnets each. How many more key rings than refrigerator magnets does the gift shop order?