

## Section A: Practice Problems

### 1. Pre-unit

Which number could be labeled on the number line?



A. 23

B. 45

C. 77

D. 92

### 2. Pre-unit

There are 85 students on the playground. There are 57 fewer students in the classroom than on the playground. How many students are in the classroom? Explain or show your reasoning.

### 3. Pre-unit

Jada says she can find  $87 - 59$  by taking away 60 from 87 and adding 1 so it is the same as  $27 + 1$  or 28. Explain or show why Jada's method to calculate  $87 - 59$  makes sense.

**4. Pre-unit**

Find the value of  $316 + 514$ . Explain or show your reasoning.

**5. Pre-unit**

Put a  $<$  or  $>$  in the blank to make each statement true.

a.  $197$  \_\_\_\_\_  $311$

b.  $567$  \_\_\_\_\_  $555$

c.  $908$  \_\_\_\_\_  $809$

**6. Pre-unit**

Find the value of each expression.

a.  $206 + 543$

b.  $327 + 181$

c.  $674 - 129$

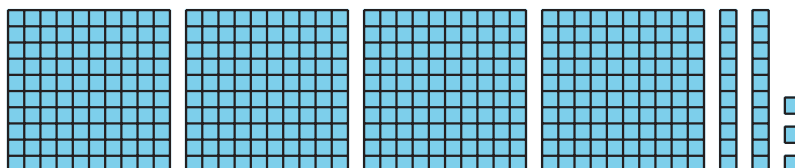
7. Select **all** representations of the number four hundred twenty-three.

A. 324

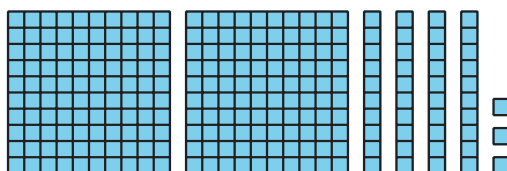
B. 423

C.  $400 + 30 + 2$

D.



E.



(From Unit 3, Lesson 1.)

8. The height of the Empire State Building in New York City is 443 meters. The tallest building in the world is 830 meters. How many meters taller than the Empire State Building is the tallest building in the world?

(From Unit 3, Lesson 2.)

9. Find the value of each sum in any way that makes sense to you. Explain or show your reasoning.

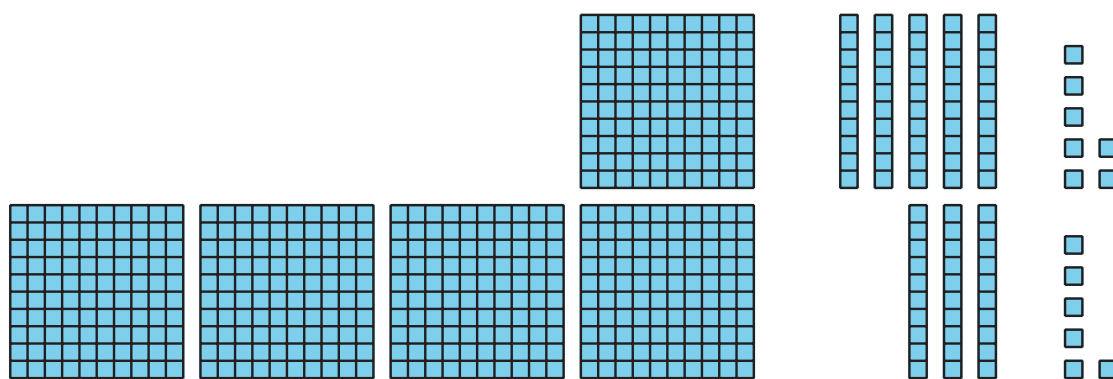
a.  $456 + 231$

b.  $372 + 165$

(From Unit 3, Lesson 3.)

10. Here are three different ways to find the value of  $157 + 436$ .

**A**



**B**

$$\begin{array}{r}
 100 + 50 + 7 \\
 + 400 + 30 + 6 \\
 \hline
 500 + 80 + 13
 \end{array}$$

**C**

$$\begin{array}{r}
 157 \\
 + 436 \\
 \hline
 13 \\
 80 \\
 \hline
 500 \\
 \hline
 593
 \end{array}$$

How are the methods alike? How are they different? Explain your reasoning.

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(From Unit 3, Lesson 4.)

11. Here is Elena's algorithm for finding  $273 + 481$ .

$$\begin{array}{r}
 273 \\
 + 481 \\
 \hline
 4
 \end{array}
 \quad \text{step 1}
 \qquad
 \begin{array}{r}
 100 \\
 273 \\
 + 481 \\
 \hline
 54
 \end{array}
 \quad \text{step 2}
 \qquad
 \begin{array}{r}
 100 \\
 273 \\
 + 481 \\
 \hline
 754
 \end{array}
 \quad \text{step 3}$$

a. Where does the 100 that Elena wrote in step 2 come from?

b. Use Elena's method to find  $255 + 372$ .

(From Unit 3, Lesson 5.)

12. a. What do the 1s above the 2 and 5 in 253 mean in this calculation?

$$\begin{array}{r}
 11 \\
 253 \\
 + 89 \\
 \hline
 342
 \end{array}$$

b. Use an algorithm or another strategy to find the value of each sum.

i.  $572 + 268$

ii.  $726 + 199$

(From Unit 3, Lesson 6.)

### 13. Exploration

Here is Lin's strategy to find the value of  $596 + 385$ : "I added 600 and then took away 4."

a. Explain why Lin's strategy works. Then, use it to find the value of  $596 + 385$ .

b. For which of these expressions would you use Lin's strategy? Explain or show your reasoning.

i.  $436 + 173$

ii.  $517 + 255$

iii.  $787 + 135$

iv.  $247 + 395$

#### 14. Exploration

Write an addition problem with 3-digit numbers that you think is well suited for each of the following methods. Then, find the value of the sum using that method.

a. mental strategies

b. base-ten blocks

c. an algorithm