# MY Homework

## Homework Helper

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**Jaycee bought 3 yellow apples and 4 green apples. Marshall bought 4 yellow apples and 3 green apples. How many apples did each person buy?**

$3 + 4 = 7$        $4 + 3 = 7$ ← Commutative Property of Addition

They each bought 7 apples. The order in which the addends are added does not change the sum.

You learned two other addition properties.

The Identity Property shows the sum of any number and zero is the number.

$7 + 0 = 7$

The Associative Property shows the way the addends are grouped does not change the sum.

$(7 + 4) + 3 = 7 + (4 + 3)$
$= 7 + 7$
$= 14$

## Practice

**Draw lines to match each property of addition with its correct example.**

**1.** $3 + 4 = 7$    $4 + 3 = 7$ —————• Commutative Property of Addition

**2.** $7 + 0 = 7$ • Associative Property of Addition

**3.** $7 + (3 + 4) = (7 + 3) + 4$ • Identity Property of Addition

**Find each sum. Identify the addition property.**

**4.** $46 + 0 =$ ___**46**___

____**Identity**____ Property

**5.** $(7 + 9) + 3 =$ ___**19**___   $7 + (9 + 3) =$ ___**19**___

____**Associative**____ Property

**Find each sum mentally.**

**6.** $(6 + 8) + 2 =$ ___**16**___

**7.** $3 + (2 + 4) =$ ___**9**___

## Problem Solving

**8.** **Mathematical PRACTICE** ➊ **Make Sense of Problems** Pedro and Jamal collected yellow and red leaves. They each collected the same total number of leaves. How many red leaves did Jamal collect?

**9 red leaves** _____

**5**  **9**

**Pedro's leaves**

**?**  **5**

**Jamal's leaves**

## Vocabulary Check

**Draw a line to match the vocabulary word(s) to its example.**

**9.** Commutative Property      • symbols which show grouping

**10.** parentheses      • $(3 + 1) + 4 = 8$   $3 + (1 + 4) = 8$

**11.** Identity Property      • $5 + 6 = 11$      $6 + 5 = 11$

**12.** Associative Property      • $2 + 0 = 2$

## Test Practice

**13.** Which number sentence is an example of the Associative Property?

Ⓐ $5 + 1 = 3 + 3$

Ⓒ $(8 + 2) + 5 = 8 + (2 + 5)$

Ⓑ $583 + 0 = 583$

Ⓓ $3 + 5 = 5 + 3$

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**Eddie colored the top row of an addition table blue. What is the pattern?**

The sum of any number and zero is the number. This shows the Identity Property of Addition.

**Using green, Eddie started at 2 and colored a downward diagonal pattern. What is the pattern?**

Adding 2 to an even number shows a pattern of even numbers.

**Using purple, Eddie started at 5 and colored a downward diagonal. What is the pattern?**

Adding 2 to an odd number shows a pattern of odd numbers.

| +  | 0  | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 |
|----|----|----|----|----|----|----|----|----|----|----|----|
| 0  | 0  | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 |
| 1  | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 |
| 2  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 |
| 3  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 |
| 4  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 |
| 5  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 |
| 6  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 7  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 8  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 9  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 10 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |

## Practice  1, 2. See students' work.

**Use the addition table above.**

**1.** Shade a diagonal of odd numbers red.

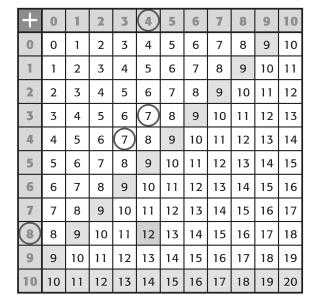**2.** Shade a diagonal of even numbers yellow.

**Use the addition table.**

**3.** Circle two squares that each represent a sum of 3 and 4. This shows the Commutative Property of Addition.

$3 + 4 =$ __7__ and $4 + 3 =$ __7__

**4.** Circle the two addends which make a sum of the shaded 12. Write the number sentence.

**Sample answer: 8 + 4 = 12**

**5.** Shade a diagonal of numbers green that show the sums equal to 9.

**6.** Shade a row of numbers yellow that represents sums with one addend of 10.

| + | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----|----|----|----|----|----|----|----|----|----|----|----|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 2 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 3 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 4 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 5 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 6 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 7 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 8 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 9 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 10 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |

## Real World Problem Solving

**7.** **Mathematical PRACTICE 3 Justify Conclusions** Jasmine had 11 friends over at her house. Every time the doorbell rang, 2 more friends arrived. The doorbell rang 3 times. How many friends did Jasmine have over altogether?

**17 friends**

**8.** Steve colors the following sums on an addition table. If he continues the pattern, will the numbers continue to be even? Explain.

**12, 14, 16, 18**

**Yes; Sample answer: When you add an even number to**

**an even number, the result will be an even number.**

## Test Practice

**9.** Danielle is saving for a bicycle. Her last 4 bank deposits are shown in the table. If the pattern continues, how much will her next bank deposit be?

Ⓐ $2    Ⓑ $16    ● $17    Ⓓ $19

| Bank Deposits |
|---------------|
| $9 |
| $11 |
| $13 |
| $15 |
| ? |

# MY Homework

**Lesson 3**

Addition Patterns

## Homework Helper

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Over several years, Mrs. Bowers' students made a total of 2,367 paper cranes. This year, she challenged her students to make the new total 2,467 paper cranes. How many paper cranes do they need to make this year to meet the challenge?

Use a place-value chart to find which place changed in value.

The new number is 100 more.

2,367 + 100 = 2,467

So, this year's class needs to make 100 paper cranes.

| thousands | hundreds | tens | ones |
|---|---|---|---|
| 2 | ③ | 6 | 7 |
| 2 | ④ | 6 | 7 |

## Practice

**Write the number in the place-value chart.**

**1.** 10 more than 567

| hundreds | tens | ones |
|---|---|---|
| 5 | 6 | 7 |
| 5 | 7 | 7 |

**2.** 1 more than 358

| hundreds | tens | ones |
|---|---|---|
| 3 | 5 | 8 |
| 3 | 5 | 9 |

**3.** 1,000 more than 1,529

| thousands | hundreds | tens | ones |
|---|---|---|---|
| 1 | 5 | 2 | 9 |
| 2 | 5 | 2 | 9 |

**4.** 100 more than 5,834

| thousands | hundreds | tens | ones |
|---|---|---|---|
| 5 | 8 | 3 | 4 |
| 5 | 9 | 3 | 4 |

**Complete the number sentence.**

5.

| thousands | hundreds | tens | ones |
|---|---|---|---|
| 1 | 2 | 7 | 1 |
| 2 | 2 | 7 | 1 |

1,271 + __1,000__ = 2,271

6.

| thousands | hundreds | tens | ones |
|---|---|---|---|
| 4 | 2 | 4 | 4 |
| 4 | 3 | 4 | 4 |

4,244 + __100__ = 4,344

**Write the number.**

7. 10 more than 1,465

__1,475__

8. 100 more than 8,699

__8,799__

9. 1,000 more than 3,007

__4,007__

**Identify and complete the number pattern.**

10. 2,378; 2,478; 2,578; __2,678__ ; 2,778; 2,878

The number pattern is __add 100__ .

11. 5,903; 5,913; 5,923; __5,933__ ; 5,943; 5,953

The number pattern is __add 10__ .

## Real World Problem Solving

12. **Mathematical PRACTICE** 4 **Model Math** A baby horse weighed 104 pounds at birth. In one month, it gained 100 pounds. How much does the horse weigh now? Complete the number sentence to show the change.

104 + __100__ = __204__

## Test Practice

13. Which pattern shows 100 more?

Ⓐ 1,456; 1,556; 1,656; 1,756

Ⓒ 5,832; 5,833; 5,834; 5,835

Ⓑ 4,987; 4,887; 4,787; 4,687

Ⓓ 6,001; 7,001; 8,001; 9,001

# MY Homework

**Lesson 4**

**Add Mentally**

## Homework Helper

eHelp

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**There are 58 passengers on a subway train. At the next stop, 33 more passengers board the train. How many passengers are there altogether?**

You can add mentally.

Make one addend a ten such as 10, 20, 30, and so on.

58 $+ 2$ ← Give, or add, 2 to the first addend. → 60

$+ 33$ $- 2$ ← Take, or subtract, 2 from the second addend. → $+ 31$

_____

91

**Helpful Hint**

60 and 31 are easier numbers to add.

So, 60 + 31 = 91. There are 91 passengers.

## Practice

**Break apart the addends to add mentally.**

1. $\quad 41 \ = \quad 40 \ + \ \boxed{1}$

$\quad + 26 \ = \ \boxed{20} \ + \quad 6$

_____

$\quad \boxed{67} \ = \quad 60 \ + \quad 7$

2. $\quad 328 \ = \ \boxed{300} \ + \ 20 \ + \ 8$

$\quad + 254 \ = \quad 200 \quad + \ \boxed{50} \ + \ \boxed{4}$

_____

$\quad \boxed{582} = \boxed{500} \ + \ \boxed{70} \ + \ 12$

**Make a ten or a hundred to add mentally.**

3. $\quad 76 \ + \quad 7$

$\qquad - 3 \qquad + 3$

_____

$\quad \boxed{73} + \boxed{10} = \boxed{83}$

4. $\quad 598 \ + \quad 256$

$\qquad + 2 \qquad - 2$

_____

$\quad \boxed{600} + \boxed{254} = \boxed{854}$

**Make a ten or a hundred to add mentally.** Sample computations: 5, 6

**5.** $339 + 123$

$\boxed{+1}$ $\boxed{-1}$

$\boxed{340} + \boxed{122} = \boxed{462}$

**6.** $399 + 428$

$\boxed{+1}$ $\boxed{-1}$

$\boxed{400} + \boxed{427} = \boxed{827}$

**Break apart the addends to add mentally.**

**7.** $767 = \boxed{700} + \boxed{60} + \boxed{7}$

$\quad + 29 = \qquad \boxed{20} + \boxed{9}$

$\boxed{796} = \boxed{700} + \boxed{80} + \boxed{16}$

**8.** $214 = \boxed{200} + \boxed{10} + \boxed{4}$

$\quad + 127 = \boxed{100} + \boxed{20} + \boxed{7}$

$\boxed{341} = \boxed{300} + \boxed{30} + \boxed{11}$

## Problem Solving

**9.** **Mathematical PRACTICE 2** **Use Number Sense**
Lambert's Livery rents canoes every weekend. How many total canoes were rented in June and July?

| Lambert's Livery Canoe Rentals | |
|---|---|
| Month | Rentals |
| June | 154 |
| July | 198 |
| August | 176 |

**352 canoes**

*My Work!*

## Test Practice

**10.** During Math Week, there were 77 visitors on Monday and 28 visitors on Tuesday. How many visited during Math Week those two days?

ⓐ 49 visitors

ⓒ 105 visitors

ⓑ 95 visitors

ⓓ 205 visitors

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**The parking lot in front of the school has 153 parking spaces. The parking lot behind the school has 138 spaces. About how many parking spaces are there in all?**

Estimate 153 + 138.

Round, and then add.

**One Way  Hundreds Place**

| hundreds | tens | ones |
|----------|------|------|
| 1 | 5 | 3 |
| 1 | 3 | 8 |

→ 200
→ + 100
300

To the nearest hundred, the parking lot has about 300 parking spaces.

**Another Way  Tens Place**

| hundreds | tens | ones |
|----------|------|------|
| 1 | 5 | 3 |
| 1 | 3 | 8 |

→ 150
→ + 140
290

To the nearest ten, the parking lot has about 290 parking spaces.

Both estimates are reasonable.

## Practice

**Estimate. Round each addend to the indicated place value.**

**1.** 34 + 65; tens

__30__ + __70__ = __100__

**2.** 583 + 321; hundreds

__600__ + __300__ = __900__

**3.** 591 + 234; hundreds

__600__ + __200__ = __800__

**4.** $3,327 + $1,548; tens

__$3,330__ + __$1,550__ = __$4,880__

**5.** 2,613 + 3,177; tens

__2,610__ + __3,180__ = __5,790__

**6.** $251 + $207; hundreds

__$300__ + __$200__ = __$500__

**7.** Estimate. Round each addend to the nearest ten and nearest hundred.

|  | Nearest Ten | Nearest Hundred |
|---|---|---|
| 363<br>+ 132 | **360**<br>**+ 130**<br>**490** | **400**<br>**+ 100**<br>**500** |

## Problem Solving

*Real World*

**8.** Three large pizzas cost $36. Two medium pizzas cost $25. To the nearest ten, about how much do all 5 pizzas cost?

**$40 + $30 = $70**

**9.** **Mathematical PRACTICE 2** **Use Number Sense** Four hundred ninety-one people attended the school play and 422 people attended the band concert. About how many people attended these two events altogether? Round to the nearest hundred.

**500 + 400 = 900 people**

## Vocabulary Check

Vocab

**10.** Use each word below to explain how you solved Exercise 9.

round          estimate

**Sample answer: I rounded 491 to 500 and 422 to 400.**

**Then I added the two estimates to get the estimated sum.**

## Test Practice

**11.** Which of the following is the estimated sum of 380 and 437 to the nearest hundred?

Ⓐ 700          Ⓒ 817

Ⓑ 800          Ⓓ 820

# MY Homework

## Homework Helper

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**How many total miles did Carrie travel?**

| City to City | Distance |
|---|---|
| Buffalo to Harrisburg | 186 miles |
| Harrisburg to Philadelphia | 105 miles |

**1** Estimate the sum.
$186 + 105 \rightarrow 200 + 100 = 300$ ← Use your estimate to check for reasonableness later.

**2** Model $186 + 105$.

**3** Regroup 10 ones for 1 ten.

| hundreds | tens | ones |
|---|---|---|

**4** Add the tens and the hundreds.

There are 2 hundreds, 9 tens, and 1 ones.

$186 + 105 = 291$
Carrie traveled 291 miles.

**Check**

291 is close to the estimate of 300. The answer is reasonable.

## Practice    See students' work.

**1.** Draw place-value blocks to show the sum.

$272 + 119 = \underline{\quad 391 \quad}$

**Draw place-value blocks to show the sum.**     **See students' work.**

**2.** 632 + 354 = _____986_____          **3.** 216 + 775 = _____991_____

## Problem Solving

**4.** **Mathematical PRACTICE** ➍ **Model Math** Luisa has 183 pennies. Her dad gives her 128 more. Write a number sentence to show how many pennies Luisa has now.

**183 + 128 = 311 pennies**

**5.** Jonah has read 265 pages. He has 147 more to read. How many pages will he read in all?

**412 pages**

## Vocabulary Check

**Choose the correct word to complete each sentence.**

reasonable          regroup          sum

**6.** _____**Regroup**_____ means to rename a number using place value.

**7.** The answer to an addition sentence is called the __**sum**__ .

**8.** Estimate the exact answer before solving the problem to see if your answer is _____**reasonable**_____ .

# MY Homework

## Homework Helper

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**A toy store sold 223 robots last year. This year, they sold 198 robots. How many robots did they sell over the two years?**

Find 223 + 198.

**Estimate**            223 + 198 ⟶ 200 + 200 = 400

**1 Add the ones.**
3 ones + 8 ones = 11 ones
Regroup 11 ones as 1 ten and 1 one.

**2 Add the tens and hundreds.**
1 ten + 2 tens + 9 tens = 12 tens
Regroup 12 tens as 1 hundred and 2 tens.
1 hundred + 2 hundreds + 1 hundred = 4 hundreds

$$
\begin{array}{r}
1\ 1 \\
223 \\
+\ 198 \\
\hline
421
\end{array}
$$

**Check for reasonableness**

421 is close to the estimate of 400. The answer is reasonable.

So, 223 + 198 = 421.

The store sold 421 toy robots over the two years.

## Practice

**Add. Check for reasonableness.**   **Sample estimates: 1–3**

**1.**

|   | 1 | 1 |   |
|---|---|---|---|
|   | 1 | 7 | 8 |
| + |   | 9 | 9 |
|   | 2 | 7 | 7 |

Estimate:
**180 + 100 = 280**

**2.**

|   | 1 |   |   |
|---|---|---|---|
|   | 6 | 9 | 5 |
| + | 1 | 4 | 1 |
|   | 8 | 3 | 6 |

Estimate:
**700 + 100 = 800**

**3.**

|   |   | 1 |   |
|---|---|---|---|
| $ | 3 | 2 | 7 |
| + $ |   | 5 | 6 |
| $ | 3 | 8 | 3 |

Estimate:
**$330 + $60 = $390**

**Add. Use the Commutative Property to check for accuracy.**

**4.**

| | $ | 3 | 5 | 0 |
|---|---|---|---|---|
| + | $ | 4 | 6 | 5 |
| | $ | 8 | 1 | 5 |

| | $ | 4 | 6 | 5 |
|---|---|---|---|---|
| + | $ | 3 | 5 | 0 |
| | $ | 8 | 1 | 5 |

**5.**

| | 1 | 9 | 6 |
|---|---|---|---|
| + | 2 | 8 | 6 |
| | 4 | 8 | 2 |

| | 2 | 8 | 6 |
|---|---|---|---|
| + | 1 | 9 | 6 |
| | 4 | 8 | 2 |

**Algebra** **Add to find the unknown.**

**6.** 661 + 99 = ■

|   | 1 | 1 |   |
|---|---|---|---|
|   | 6 | 6 | 1 |
| + |   | 9 | 9 |
|   | 7 | 6 | 0 |

The unknown is ⬚ 7 6 0 ⬚.

**7.** $258 + $337 = ■

|   |   | 1 |   |
|---|---|---|---|
| $ | 2 | 5 | 8 |
| + $ | 3 | 3 | 7 |
| $ | 5 | 9 | 5 |

The unknown is ⬚ $595 ⬚.

**8.** $739 + $81 = ■

|   | 1 | 1 |   |
|---|---|---|---|
| $ | 7 | 3 | 9 |
| + $ |   | 8 | 1 |
| $ | 8 | 2 | 0 |

The unknown is ⬚ $820 ⬚.

## Real World Problem Solving

**9.** **Mathematical PRACTICE 1** **Make a Plan** The principal ordered 215 muffins and 155 bagels. How many muffins and bagels were ordered in all?

**370 muffins and bagels**

## Vocabulary Check

**Choose the correct word to complete each sentence.**

reasonable          regroup          unknown

**10.** To **regroup** means to rename a number using place value.

**11.** A missing number is the **unknown**.

**12.** If an answer makes sense, it is **reasonable**.

## Test Practice

**13.** Mrs. Lewis bought two statues for her garden. One cost $145 and one cost $262. What was the total cost?

ⓐ $117          ⓒ $407

ⓑ $317          ⓓ $410

# MY Homework

## Homework Helper

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**The circus had an attendance of 7,245 people in the bleachers and 1,877 people in the box seats for the Friday night show. How many people attended the circus altogether?**

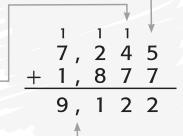Find 7,245 + 1,877.

**Estimate** 7,200 + 1,900 = 9,100

**1 Add the ones.**

5 ones + 7 ones = 12 ones
Regroup 12 ones as 1 ten and 2 ones.

**2 Add the tens.**

1 ten + 4 tens + 7 tens = 12 tens
Regroup 12 tens as 1 hundred and 2 tens.

**3 Add the hundreds and thousands.**

1 hundred + 2 hundreds + 8 hundreds = 11 hundreds
Regroup 11 hundreds as 1 thousand and 1 hundred.
1 thousand + 7 thousands + 1 thousand = 9 thousands

```
  1   1   1
  7 , 2 4 5
+ 1 , 8 7 7
-----------
  9 , 1 2 2
```

**Check for reasonableness.**

9,122 is close to the estimate of 9,100.
The answer is reasonable.

7,245 + 1,877 = 9,122.
On Friday night, 9,122 people attended the circus.

## Practice

**Add. Check for reasonableness.** **1–2. See students' estimates.**

**1.**

| | | 1 | | |
|---|---|---|---|---|
| | 4, | 0 | 9 | 1 |
| + | 2, | 2 | 3 | 8 |
| | 6, | 3 | 2 | 9 |

**2.**

| | | 1 | 1 | 1 |
|---|---|---|---|---|
| | $ 5, | 0 | 4 | 5 |
| + | $ 3, | 9 | 9 | 9 |
| | $ 9, | 0 | 4 | 4 |

**Add. Check for reasonableness.  3–5. See students' estimates.**

**3.**

|   |    | ¹ | ¹ |   |
|---|----|---|---|---|
|   | 2, | 0 | 8 | 8 |
| + | 6, | 3 | 4 | 6 |
|   | 8, | 4 | 3 | 4 |

**4.**

|   |    | ¹ |   | ¹ |   |
|---|----|---|---|---|---|
|   | 4, | 4 | 6 | 3 |
| + | 4, | 8 | 1 | 9 |
|   | 9, | 2 | 8 | 2 |

**5.**

|   |    | ¹ |   | ¹ |   |
|---|----|---|---|---|---|
|   | 3, | 8 | 6 | 6 |
| + | 4, | 7 | 2 | 7 |
|   | 8, | 5 | 9 | 3 |

**6.** Use the Commutative Property to check your answer to Exercise 3.

$$6{,}346$$
$$+\,2{,}088$$
$$8{,}434$$

**Algebra Add to find each unknown.**

**7.** $7{,}028 + 2{,}578 = \blacksquare$

**8.** $5{,}724 + 2{,}197 = \blacksquare$

**9.** $4{,}999 + 4{,}265 = \blacksquare$

|   |    | ¹ | ¹ |   |
|---|----|---|---|---|
|   | 7, | 0 | 2 | 8 |
| + | 2, | 5 | 7 | 8 |
|   | 9, | 6 | 0 | 6 |

The unknown is __9,606__.

|   |    | ¹ | ¹ |   |
|---|----|---|---|---|
|   | 5, | 7 | 2 | 4 |
| + | 2, | 1 | 9 | 7 |
|   | 7, | 9 | 2 | 1 |

The unknown is __7,921__.

|   |    | ¹ | ¹ | ¹ |
|---|----|---|---|---|
|   | 4, | 9 | 9 | 9 |
| + | 4, | 2 | 6 | 5 |
|   | 9, | 2 | 6 | 4 |

The unknown is __9,264__.

# Problem Solving

**10. Mathematical PRACTICE ②  Use Algebra** Rachael ran 3,012 meters on Monday and 5,150 meters on Wednesday. How many meters did she run altogether? Write a number sentence with a symbol for the unknown. Then solve.

|------- ■ total meters --------|

| 3,012 | 5,150 |
|-------|-------|

$3{,}012 + 5{,}150 = \blacksquare$; **8,162 meters**

# Test Practice

**11.** Mr. Shelton worked 1,976 hours one year and 2,080 hours the next year. What is the total number of hours Mr. Shelton worked in those two years?

Ⓐ 3,056 hours          Ⓒ 4,156 hours

Ⓑ 3,956 hours          Ⓓ 4,056 hours

# MY Homework

## Homework Helper

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**Is it reasonable to say that about 3,000 students participated in the survey?**

| Career Survey | |
|---|---|
| Scientist | 2,129 votes |
| Writer | 1,093 votes |
| Doctor | 1,076 votes |

### 1 Understand

**What facts do you know?**

2,129 students voted for scientist, 1,093 students voted for writer, and 1,076 students voted for doctor.

**What do you need to find?**

If 3,000 is a reasonable total for all the votes.

### 2 Plan   Estimate the sum. Then, compare the estimate to 3,000.

### 3 Solve

$$
\begin{array}{rcl}
2{,}129 & \longrightarrow & 2{,}100 \\
1{,}093 & \longrightarrow & 1{,}100 \\
+\ 1{,}076 & \longrightarrow & +\ 1{,}100 \\
\hline
& & 4{,}300
\end{array}
$$

The estimated sum of 4,300 is not close to 3,000.
So, 3,000 is not a reasonable total for all the votes.

### 4 Check   Does your answer make sense? Explain.

Yes; 2,129 + 1,093 + 1,076 is 4,298, which is not close to the suggested total of 3,000. 3,000 is not a reasonable total.

## Problem Solving   Sample explanations: 1–3, 5

**Determine a reasonable answer for each problem.**

**1.** Students have borrowed 632 fiction books and 392 non-fiction books from the school library. Is it reasonable to say the students borrowed about 1,000 books? Explain.

**Yes; I estimated 600 + 400 = 1,000.**

**2.** Some students from Sydney Elementary have entered a National Poetry contest. There are 19 second graders, 23 third graders, and 9 fourth graders who have have entered. Are there at least 50 students entered in the contest? Explain.

**Yes; 51 students have entered**

**3.** Mathematical **PRACTICE** 2 **Reason** The head of Gracie's favorite dinosaur is 14 feet long, the body is 26 feet long, and the tail is 19 feet long. Is it reasonable to say the entire dinosaur is 60 feet long? Explain.

**Yes; the sum of the addends is 59 feet.**

**Use the table to solve Exercises 4 and 5.**

| Radio Stations | |
| --- | --- |
| Country | 3,589 listeners |
| Rock | 2,986 listeners |
| Hip Hop | 3,472 listeners |

**4.** How many people listen to country and hip hop?

**7,061 listeners**

**5.** The goal for the rock station was to have 3,000 listeners. Is it reasonable to say that the rock station reached its goal? Explain.

**Yes; 2,986 rounds to 3,000.**