

AZ Vocabulary

1. You can use **compensation**, a strategy that involves choosing numbers close to the actual numbers in a problem to make the computation easier, and then adjusting the answer for the numbers chosen, to find sums and differences.

Use compensation to find $329 + 123$.

Use compensation to find $260 - 17$.

120 is easier to add than _____.

20 is easier to subtract than _____.

$329 + \underline{\hspace{2cm}} = 449$

$260 - 20 = \underline{\hspace{2cm}}$

Add 3 because _____ too few were added to 329.

_____ 3 because 3 too many were subtracted from 260.

$449 + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = 243$

2. Use compensation to find $4,215 - 3,194$.

3,200 is easier to subtract than _____.

$4,215 - \underline{\hspace{2cm}} = 1,015$

Since you subtracted 6 too many, add _____ to the difference.

$1,015 + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

3. Use compensation to find $42,396 + 31,112$.

42,400 is easier to add than _____.

$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

Since you added 4 too many, _____ from the sum.

$\underline{\hspace{2cm}} - \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

4. Use compensation to find $42,396 - 31,112$. Show all of your steps.

On the Back!

5. Use two 4-digit numbers to write and solve an addition or subtraction problem. Explain how to use compensation to find the sum or difference.

AZ Vocabulary

1. You can use **compensation**, a strategy that involves choosing numbers close to the actual numbers in a problem to make the computation easier, and then adjusting the answer for the numbers chosen, to find sums and differences.

Use compensation to find $329 + 123$.

120 is easier to add than **123**.

$$329 + \underline{\mathbf{120}} = 449$$

Add 3 because **3** too few were added to 329.

$$449 + \underline{\mathbf{3}} = \underline{\mathbf{452}}$$

Use compensation to find $260 - 17$.

20 is easier to subtract than **17**.

$$260 - 20 = \underline{\mathbf{240}}$$

Add 3 because 3 too many were subtracted from 260.

$$\underline{\mathbf{240}} + \underline{\mathbf{3}} = 243$$

2. Use compensation to find $4,215 - 3,194$.

3,200 is easier to subtract than **3,194**.

$$4,215 - \underline{\mathbf{3,200}} = 1,015$$

Since you subtracted 6 too many, add **6** to the difference.

$$1,015 + \underline{\mathbf{6}} = \underline{\mathbf{1,021}}$$

3. Use compensation to find $42,396 + 31,112$.

42,400 is easier to add than **42,396**.

$$\underline{\mathbf{42,400}} + \underline{\mathbf{31,112}} = \underline{\mathbf{73,512}}$$

Since you added 4 too many, **subtract 4** from the sum.

$$\underline{\mathbf{73,512}} - \underline{\mathbf{4}} = \underline{\mathbf{73,508}}$$

4. Use compensation to find $42,396 - 31,112$. Show all of your steps.

11,284; Check students' work.

On the Back!

5. Use two 4-digit numbers to write and solve an addition or subtraction problem. Explain how to use compensation to find the sum or difference.

Check students' work.

Vocabulary

1. An **estimate** is an approximate number or answer. An estimate is a multiple of ten that is close to a number. Some estimates for 34,218 are 34,220, 34,200, 34,000, and 30,000.

Write an estimate for 62,341. _____

2. One way to estimate is to **round**. To round, first look at the digit to the right of the rounding place. If the digit is 5 or greater, add 1 to the digit in the rounding place. If the digit is less than 5, leave the digit in the rounding place alone.

All the digits to the right of the rounding place become zeros.

Round 54,792 to the nearest thousand. _____

The closer the estimated numbers are to their actual values, the more precise an estimated sum or difference will be.

3. Circle the estimated expression that will result in the more precise difference for $56,392 - 37,461$.

$$56,400 - 37,500$$

$$56,000 - 37,000$$

4. Round each addend to the nearest ten thousand, and then find the estimated sum.

$$337,961 + 482,746$$

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

5. Estimate the sum.

$$97,991 + 102,489$$

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

6. Estimate the difference.

$$645,908 - 335,297$$

$$\underline{\hspace{2cm}} - \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

On the Back!

7. Write an equation using two addends that, when rounded to the nearest thousand, result in a sum of 47,000. Explain how you chose the addends.

Vocabulary

1. An **estimate** is an approximate number or answer. An estimate is a multiple of ten that is close to a number. Some estimates for 34,218 are 34,220, 34,200, 34,000, and 30,000.

Write an estimate for 62,341. **Sample answer: 62,000**

2. One way to estimate is to **round**. To round, first look at the digit to the right of the rounding place. If the digit is 5 or greater, add 1 to the digit in the rounding place. If the digit is less than 5, leave the digit in the rounding place alone.

All the digits to the right of the rounding place become zeros.

Round 54,792 to the nearest thousand. **55,000**

The closer the estimated numbers are to their actual values, the more precise an estimated sum or difference will be.

3. Circle the estimated expression that will result in the more precise difference for $56,392 - 37,461$.

$$\textcircled{56,400 - 37,500}$$

$$56,000 - 37,000$$

4. Round each addend to the nearest ten thousand, and then find the estimated sum.

$$\begin{array}{r} 337,961 + 482,746 \\ \underline{340,000} + \underline{480,000} = \underline{820,000} \end{array}$$

5. Estimate the sum. **Sample answer given.**

$$\begin{array}{r} 97,991 + 102,489 \\ \underline{98,000} + \underline{102,000} = \underline{200,000} \end{array}$$

6. Estimate the difference. **Sample answer given.**

$$\begin{array}{r} 645,908 - 335,297 \\ \underline{646,000} - \underline{335,000} = \underline{311,000} \end{array}$$

On the Back!

7. Write an equation using two addends that, when rounded to the nearest thousand, result in a sum of 47,000. Explain how you chose the addends.

Check students' work.

AZ Vocabulary

1. An **algorithm** is a set of steps used to solve a math problem. The algorithm to use when adding whole numbers is shown at the right.

Use the steps to find the sum.

$$\begin{array}{r} 34,227 \\ + 12,321 \\ \hline \end{array}$$

1. Add the ones. Regroup if needed.
2. Add the tens. Regroup if needed.
3. Add the hundreds. Regroup if needed.
4. Add the thousands. Regroup if needed.
5. Add the ten thousands. Regroup if needed.

2. Find $2,835 + 429$.

Write the addends. Align place values. Then use the algorithm to add.

$$\begin{array}{r} 2,835 \\ + 429 \\ \hline \end{array}$$

3. Estimate to check if your answer to Exercise 2 is reasonable. Is your answer close to your estimate?

4. Add $462,810 + 289,467$.

Write the addends. Align place values. Then use the algorithm to add.

$$\begin{array}{r} 462,810 \\ + 289,467 \\ \hline \end{array}$$

5. Estimate to check if your answer to Exercise 4 is reasonable. Is your answer close to your estimate?

On the Back!

6. Find $1,567 + 302 + 984$. Estimate to check.

A2 Vocabulary

1. An **algorithm** is a set of steps used to solve a math problem. The algorithm to use when adding whole numbers is shown at the right.

Use the steps to find the sum.

$$\begin{array}{r} 34,227 \\ + 12,321 \\ \hline 46,548 \end{array}$$

1. Add the ones. Regroup if needed.
2. Add the tens. Regroup if needed.
3. Add the hundreds. Regroup if needed.
4. Add the thousands. Regroup if needed.
5. Add the ten thousands. Regroup if needed.

2. Find $2,835 + 429$.

Write the addends. Align place values. Then use the algorithm to add.

$$\begin{array}{r} 1 \quad 1 \\ 2,835 \\ + \quad 429 \\ \hline 3,264 \end{array}$$

3. Estimate to check if your answer to Exercise 2 is reasonable. Is your answer close to your estimate?

Yes; Sample answer: 3,264 is close to 3,400.

4. Add $462,810 + 289,467$.

Write the addends. Align place values. Then use the algorithm to add.

$$\begin{array}{r} 1 \quad 1 \quad 1 \\ 462,810 \\ + 289,467 \\ \hline 752,277 \end{array}$$

5. Estimate to check if your answer to Exercise 4 is reasonable. Is your answer close to your estimate?

Yes; Sample answer: 752,277 is close to 750,000.

On the Back!

6. Find $1,567 + 302 + 984$. Estimate to check.

2,853; Sample answer: $1,600 + 300 + 1,000 = 2,900$, and 2,853 is close to 2,900, so my answer is reasonable.

Name _____

AZ Vocabulary

1. Addition and subtraction have an inverse relationship. Operations that undo each other are **inverse operations**.

Subtract. Then use addition to check your answer.

$$\begin{array}{r} 81013 \\ 57,913 \\ - 20,468 \\ \hline 37,445 \end{array}$$

$$\begin{array}{r} 37,445 \\ + 20,468 \\ \hline 57,913 \end{array}$$

2. Write $82,571 - 59,347$ aligning the digits by place value. Then solve.

$$\begin{array}{r} 82,571 \\ - 59,347 \\ \hline \end{array}$$

3. Estimate the difference in Exercise 2.

$80,000 - \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

4. Is your answer to Exercise 2 reasonable? Explain.

5. What is another way to check your answer?

6. Use addition to check if your answer is reasonable.

$$\begin{array}{r} + 59,347 \\ \hline \end{array}$$

On the Back!

7. Find $795,362 - 469,989$. Show two ways to check your answer.

Name _____

AZ Vocabulary

1. Addition and subtraction have an inverse relationship. Operations that undo each other are **inverse operations**.

Subtract. Then use addition to check your answer.

$$\begin{array}{r} 81013 \\ 57,913 \\ - 20,468 \\ \hline 37,445 \end{array}$$

$$\begin{array}{r} 37,445 \\ + 20,468 \\ \hline 57,913 \end{array}$$

2. Write $82,571 - 59,347$ aligning the digits by place value. Then solve.

$$\begin{array}{r} 82,571 \\ - 59,347 \\ \hline 23,224 \end{array}$$

3. Estimate the difference in Exercise 2.

$$80,000 - \underline{60,000} = \underline{20,000}$$

4. Is your answer to Exercise 2 reasonable? Explain.

Yes; Sample answer: The estimated difference is close to the exact difference, so my answer is reasonable.

5. What is another way to check your answer?

Add the difference as shown above.

6. Use addition to check if your answer is reasonable.

$$\begin{array}{r} 1 \quad 1 \\ 23,224 \\ + 59,347 \\ \hline 82,571 \end{array}$$

On the Back!

7. Find $795,362 - 469,989$. Show two ways to check your answer.
325,373; Check students' work.

Name _____

Reteach to Build
Understanding

2-5

Vocabulary

1. **Regrouping** is used to name a whole number in a different way.
Regroup to complete each statement.

1 ten = _____ ones

1 hundred = _____ tens

2 tens, 2 ones = 1 ten, _____ ones

3 hundreds, 6 tens = 2 hundreds, _____ tens.

2. Subtract $30,220 - 4,116$.

Write the problem vertically, and use the algorithm to find the difference.



1. Subtract the ones. Regroup.

2 tens = 1 ten, _____ ones

2. Subtract the tens.

3. Subtract the hundreds.

4. Subtract the thousands. Regroup.

3 ten thousands = _____ ten thousands, 10 thousands

3. Subtract $830,502 - 746,319$.

Write the problem vertically, and use the algorithm to find the difference.



On the Back!

4. Subtract $78,305 - 56,419$. Use addition to check your answer.

Vocabulary

1. **Regrouping** is used to name a whole number in a different way. Regroup to complete each statement.

$$1 \text{ ten} = \mathbf{10} \text{ ones}$$

$$1 \text{ hundred} = \mathbf{10} \text{ tens}$$

$$2 \text{ tens, } 2 \text{ ones} = 1 \text{ ten, } \mathbf{12} \text{ ones}$$

$$3 \text{ hundreds, } 6 \text{ tens} = 2 \text{ hundreds, } \mathbf{16} \text{ tens.}$$

2. Subtract $30,220 - 4,116$.

Write the problem vertically, and use the algorithm to find the difference.

$$\begin{array}{r} \mathbf{210} \quad \mathbf{110} \\ \cancel{30}, \cancel{2} \cancel{2} \cancel{0} \\ - \mathbf{4,116} \\ \hline \mathbf{26,104} \end{array}$$

1. Subtract the ones. Regroup.

$$2 \text{ tens} = 1 \text{ ten, } \mathbf{10} \text{ ones}$$

2. Subtract the tens.

3. Subtract the hundreds.

4. Subtract the thousands. Regroup.

$$3 \text{ ten thousands} = \mathbf{2} \text{ ten thousands, } 10 \text{ thousands}$$

3. Subtract $830,502 - 746,319$.

Write the problem vertically, and use the algorithm to find the difference.

$$\begin{array}{r} \mathbf{12} \quad \mathbf{9} \\ \mathbf{7,210,410} \mathbf{12} \\ \cancel{8}, \cancel{3}, \cancel{0}, \cancel{5}, \cancel{0}, \cancel{2} \\ - \mathbf{746,319} \\ \hline \mathbf{84,183} \end{array}$$

On the Back!

4. Subtract $78,305 - 56,419$. Use addition to check your answer.

$$\mathbf{21,886; 56,419 + 21,886 = 78,305}$$

AZ Vocabulary

1. An **equation** is a number sentence that uses the equal sign (=) to show that two expressions have the same value.

Write an equation to show $32,947 + 17,374$ and the sum.

_____ + _____ = _____

2. A **variable** is a symbol or letter that stands for a number. Identify the variable in the equation $102,832 + p = 270,013$.

Use Exercises 3–5 to answer the question.

Gary and Leona traveled a total of 72,648 miles last year on business. Gary traveled 43,975 miles. How many miles did Leona travel?

3. What quantities are given in the problem, and what do the numbers mean?

4. Complete the bar diagram to show how to find, t , the number of miles Leona traveled.



5. Write and solve an equation to answer the question.

On the Back!

6. Wyoming has a land area of 93,140 square miles. Oregon has a land area 2,856 square miles greater than Wyoming. What is the land area of Oregon? Draw a bar diagram, and write and solve an equation for the bar diagram.

A2 Vocabulary

1. An **equation** is a number sentence that uses the equal sign (=) to show that two expressions have the same value.

Write an equation to show $32,947 + 17,374$ and the sum.

$$\underline{32,947} + \underline{17,374} = \underline{50,321}$$

2. A **variable** is a symbol or letter that stands for a number. Identify the variable in the equation $102,832 + p = 270,013$.

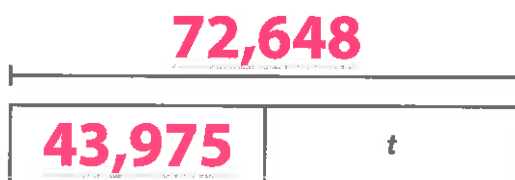
p

Use Exercises 3–5 to answer the question.

Gary and Leona traveled a total of 72,648 miles last year on business. Gary traveled 43,975 miles. How many miles did Leona travel?

3. What quantities are given in the problem, and what do the numbers mean?
72,648 is the total number of miles; 43,975 is the number of miles Gary traveled.

4. Complete the bar diagram to show how to find, t , the number of miles Leona traveled.



5. Write and solve an equation to answer the question.

Sample answer: $43,975 + t = 72,648$; $t = 28,673$ miles

On the Back!

6. Wyoming has a land area of 93,140 square miles. Oregon has a land area 2,856 square miles greater than Wyoming. What is the land area of Oregon? Draw a bar diagram, and write and solve an equation for the bar diagram.

95,996 square miles; Check students' work.

Name: _____

Column Addition

Use column addition to solve each problem. Use the empty space to the right of each problem to show your work. Write your answer on the blank line by each question.

Work Space

1. Emily, Melissa, and Matthew each have 224 baseball cards. How many cards do they have in all?

Answer: _____

2. Ryan, Dominic, and Brittney were collecting acorns. Ryan gathered 109 in his bag. Dominic collected 87 in his bag. Brittney picked up 132 acorns. At the end of the day, they put all the acorns into a cardboard box. How many acorns were in the box?

Answer: _____

3. Marla, Berkeley, and Calvin were all playing a video game. Marla's score was 645. Berkeley's score was 121. Calvin's score was 329. Find the sum of their scores.

Answer: _____

4. Christopher, Nathan, and Samantha went to the ice cream stand. Christopher ordered a chocolate ice cream cone for \$2.25. Nathan ordered a hot fudge sundae for \$3.29. Samantha ordered a strawberry milkshake for \$2.85. Samantha said, "I'll pay for all of our orders." How much did she have to pay?

Answer: _____

Name: _____

Subtracting Across Zero

Subtract to find the differences.

a.
$$\begin{array}{r} 4,000 \\ - 1,374 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 7,000 \\ - 5,613 \\ \hline \end{array}$$



c.
$$\begin{array}{r} 8,005 \\ - 732 \\ \hline \end{array}$$

d.
$$\begin{array}{r} 6,000 \\ - 2,907 \\ \hline \end{array}$$

e.
$$\begin{array}{r} 3,006 \\ - 2,383 \\ \hline \end{array}$$

f.
$$\begin{array}{r} 9,000 \\ - 320 \\ \hline \end{array}$$

g.
$$\begin{array}{r} 5,000 \\ - 2,136 \\ \hline \end{array}$$

h.
$$\begin{array}{r} 6,008 \\ - 4,804 \\ \hline \end{array}$$

i.
$$\begin{array}{r} 4,000 \\ - 995 \\ \hline \end{array}$$

j.
$$\begin{array}{r} 8,000 \\ - 680 \\ \hline \end{array}$$

- k. A carnival has come to town! The people who run the ring toss game had 1,000 prizes to give away. Customers have already won 307 prizes. How many prizes are left?

- l. The hot dog stand at the carnival had 2,000 hot dogs. They sold 1,259 of them. How many hot dogs do they have left?
