[Objective]

The student will add and subtract with decimals to the thousandths place in mathematical and real-world situations.

[Prerequisite Skills]

addition and subtraction of whole numbers, decimal place value

[Materials]

Student pages **S134–S148**
1 sheet of colored paper for decimal foldable

[Essential Questions]

1. Why is it important to know how to add decimals?
2. Why is it important to know how to subtract decimals?
3. How can you add and subtract decimals with different place values?

[Words For Word Wall]

decimals, addend, minuend, subtrahend, place holder, place value, tenths, hundredths, thousandths, difference, sum

[Grouping]

Cooperative Pairs (CP), Whole Group (WG), Individual (I)

[Levels of Teacher Support]

Modeling (M), Guided Practice (GP), Independent Practice (IP)

[Multiple Representations]

SOLVE, Verbal Description, Pictorial Representation, Graphic Organizer

[Warm-Up] (IP, I, WG) S134 (Answers are on T285.)

- Have students turn to S134 in their books to begin the Warm-Up. Students will practice identifying the place value of digits in decimals, including decimals to the thousandths place. Monitor students to see if any of them need help during the Warm-Up. Have students complete the problems and then review the answers as a class. **{Verbal Description, Graphic Organizer}**

[Homework]

Take time to go over the homework from the previous night.

[Lesson] [1 – 2 Days (1 day = 80 minutes) – M, GP, WG, CP, IP]

SOLVE Problem **(WG, GP) S135 (Answers on T286.)**

Have students turn to S135 in their books. The first problem is a SOLVE problem. You are only going to complete the S step with students at this point. Tell students that during the lesson they will learn how to add and subtract decimals to the thousandths place. They will use this knowledge to complete this SOLVE problem at the end of the lesson. **{SOLVE, Verbal Description, Graphic Organizer}**

Recognizing Decimals

(CP, IP, WG) S135 (Answers on T286.)

IP, CP, WG: Have students complete Problems 1 – 5 on S135. Students will review the meaning of the value of decimals. Discuss the answers as a class. Have students write 0.2 = 0.20 beside the models in Problem 1. **{Pictorial Representation, Verbal Description}**

Adding Decimals to Hundredths

(M, GP, CP, WG, IP) S135, S136, S137 (Answers on T286, T287, T288.)

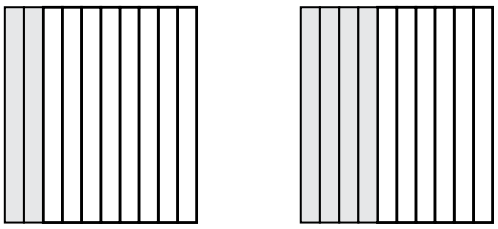
M, GP, CP, WG: Use the following modeling activity to build the concept of adding decimals through hundredths. Assign the roles of Partner A and Partner B. **{Verbal Description, Pictorial Representation, Graphic Organizer}**

MODELING

Adding Decimals to Hundredths

Step 1: Have students look at Problem 6 on the bottom of S135.

- Have students shade in two **tenths** of the first model.
- Have the students shade in four tenths of the second model.



← Shade the models.

- Partner A, if the two shaded **decimal** models were added together, what would the sum be? (six tenths)
- Partner B, how would you write six tenths as a decimal? (0.6) Record.
- Partner A, how can we write the number sentence? (Two tenths plus four tenths is equal to six tenths.) Record.
- The steps for Problem 6 are shown below.

addend → 0.2
addend → + 0.4
sum → 0.6 Find the sum.

Step 2: Have students complete Problem 7 using the same procedure as in Step

- Students will be adding decimals with **hundredths.**

Step 3: Have students turn to page S136.

- Have students describe how the model for the problem on the top of S136 is different from the two problems on S135. (One of the problems on S135 has two addends that are tenths and the other problem has two addends that are hundredths. The problem on the top of S136 has one addend that is tenths and one addend is hundredths.)
- Have students shade in three tenths (0.3) in the first model.
- Have students shade in twenty hundredths (0.20) in the second model.

Step 4: Partner A, what do you notice about the models? (The square models represent equal amounts of space.) Record.

- Have student pairs fill in the first addend in the chart in Problem 2. (0.3) Record.
- Have student pairs fill in the second addend in the place value chart in Problem 2. (0.20) Record.

Step 5: Partner B, what is the sum of the two addends? (0.5 or 0.50) Record.

- Partner A, how can we write the number sentence using the decimals with the hundredths? (Thirty hundredths plus twenty hundredths is equal to fifty hundredths.) Record.
- Partner B, what did we do to the first addend so that the two addends would have the same number of places behind the decimal point. (added a zero as a **place holder**)
- Partner A, did adding the zero as a place holder change the value of the decimal? (No, because 0.3 is equivalent to 0.30.)
- Have students look at Question 5. If 0.50 is equal to (0.5), 0.20 is equal to (0.2) and 0.30 is equal to (0.3), how could you write the decimal number sentence that is equivalent to the one in Question 4 using tenths. Record. (Three tenths plus two tenths is equal to five tenths.) Record.

CP, IP, WG: Have students work in cooperative pairs to complete Problems 1 and 2 on page S137. Students will use the model to write the addition problems in the table and then write the addition problem to determine the sum. Review the answers as a whole group. **{Verbal Description, Pictorial Representation, Graphic Organizer}**

Adding Decimals to Thousandths (M, GP, CP, WG) S137 (Answers on T288.)

M, GP, CP, WG: Students will extend the addition of decimals from the hundredths to the thousands. Make sure students know their designation as Partner A or Partner B. **{Verbal Description, Pictorial Representation, Graphic Organizer}**

MODELING

Adding Decimals to Thousandths

Step 1: Have students look at Problem 3 on S137.

- How is this problem different from Problems 1 and 2? (There is no pictorial model.)
- Partner A, what is the first addend? (fifty-one hundredths) Record in the graphic organizer.
- Partner B, what is the second addend? (two hundred thirty-six thousandths) Record in the graphic organizer.

Step 2: Partner A, what can we do so that both addends have the same number of **place values?** (Add a zero as a place holder.)

	Ones	.	Tenths	Hundredths	Thousandths
	0	**.**	**5**	**1**	**0**
	0	**.**	**2**	**3**	**6**
Sum	**0**	**.**	**7**	**4**	**6**

0.510 ← Write the 0 in the **thousandths** place of the first addend.

$$\begin{array}{r} 0.510 \\ +\ 0.236 \\ \hline 0.746 \end{array}$$

↑

Bring the decimal point straight down and find the sum.

- Partner B, what is the sum? (0.746) Record.

Subtracting with Decimals (M, WG, GP, CP) S138 (Answers on T289.)

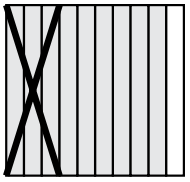
M, GP, CP, WG: Students will explore subtraction of decimals. Make sure students know their designation as Partner A or Partner B. **{Verbal Description, Pictorial Representation, Graphic Organizer}**

MODELING

Subtracting with Decimals

Step 1: Have students look at Problem 1.

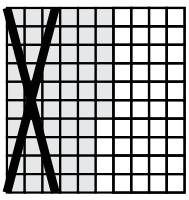
- Partner A, when creating a model for subtraction, which value do we represent? (the first value)
- Have students shade the nine tenths for Problem 1.
- Have students cross out three tenths.
- Partner B, how many tenths are left? (0.6) Record.
- Have students write the subtraction problem.
- Partner A, what do you know about the decimals when subtracting? (The decimal points must be lined up.) Record.



Step 2: Have students complete Problem 2 using the procedure from Step 1. Review the answer for the subtraction problem.

Step 3: Have students look at Problem 3.

- Partner A, how many hundredths do we shade? (fifty-six hundredths)
- Have students shade in the figure.
- Partner B, how do we model the subtraction of the thirty hundredths? (Cross them out on the model.)
- Partner A, what is the difference? (0.26) Record.
- Have students write the subtraction problem.
- Partner B, what do you know about decimals when subtracting? (The decimal points must be lined up.) Record.



Step 4: Have students complete Problem 4 and review the answers as a whole group.

Subtracting with Decimals with Mixed Numbers

(M, WG, GP, CP) S139
(Answers on T290.)

M, GP, CP, WG: Students will extend the subtraction of decimals to mixed numbers. Make sure students know their designation as Partner A or Partner B. **{Verbal Description, Pictorial Representation, Graphic Organizer}**

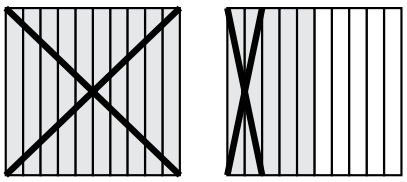
MODELING

Subtracting Decimals with Mixed Numbers

Step 1: Partner A, what is different about Problem 1 from the problems we have been subtracting? (The decimal value of the minuend is greater than 1.)

- Partner B, what does the model represent? (1.5)

Step 2: Model how to cross out 1.2 by crossing out one whole and two tenths on the model. Have students do the same in their books. Write the problem numerically lining up the decimal points.



1.5 **minuend**
−1.2 **subtrahend**
0.3 **difference**

- Partner A, how many shaded tenths are left? (3) Record.
- Have students write the subtraction problem.
- Partner B, what is true about decimals? (When subtracting the decimal points must be lined up.) Record.

Step 3: Have students complete Problem 2 creating the model and writing the subtraction problem.

Subtracting with Decimals to Thousandths

(WG, CP. M, GP, IP) S139
(Answers on T290.)

MODELING

Subtracting with Decimals to Thousandths

Step 1: Have students look at Problem 3.

- Partner A, what is different about this problem from other subtraction problems that we have worked with? (There is no pictorial model.)
- Partner B, explain how we can rewrite the problem so that we can line up the decimal points. (Write it in a vertical orientation.)
- Have students write the problem and subtract.
- Partner A, what do we need to remember when subtracting decimals? (Always line up the decimal points.)
- Partner B, what is the difference for Problem 3? (0.019)

Step 2: Have students complete Problems 4 – 6 and then review the answers as a whole group.

Add and Subtract Decimals

(CP, IP, WG) S140 (Answers on T291.)

IP, CP, WG: Have students work in cooperative pairs to complete Problems 1 – 10 on page S140. Students will need to rewrite the decimal problems and align the decimal points. Review the answers as a whole group. **{Verbal Description, Graphic Organizer}**

Decimal Foldable – Addition and Subtraction (M, GP)

MODELING

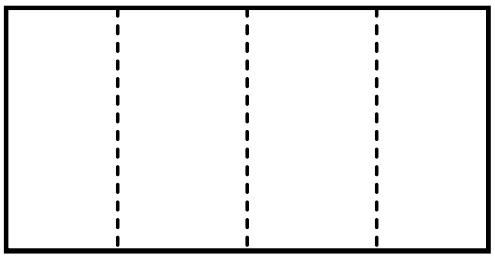
Decimal Foldable – Addition and Subtraction

Step 1: Have students place a sheet of paper on their desks in front of them. The sheet of paper should be horizontal (wider across).

Step 2: Have students fold the paper in half from left to right and crease the fold.

Step 3: Have students fold the paper again from left to right and crease the fold.

Step 4: Next, have students open the paper back up to see that they have created four sections.



Step 5: Label the first two sections Add with Decimals and Subtract with Decimals, from left to right. Write the steps for adding decimals in the first section and for subtracting decimals in the second section.

SOLVE Problems - Add and Subtract with Decimals (IP, CP, GP, WG) S141-S146 (Answers on T292-T297.)

Remind students that the SOLVE problem is the same one from the beginning of the lesson. Complete the SOLVE problem with your students. Ask them for possible connections from the SOLVE problem to the lesson. (In order to solve the problem, students will need to know how to subtract decimals.) **{SOLVE, Algebraic Formula, Verbal Description, Graphic Organizer}**

IP, CP, WG: Have students complete the SOLVE problems on S142-S146 **{SOLVE, Verbal Description, Graphic Organizer, Algebraic Formula}**

There are a variety of ways to complete these problems. Here are a few suggestions which are alternatives to having students complete all 5 problems in student pairs:

- Have students work in groups of 4 or 5 and assign them one of the SOLVE problems to complete as a group. Students can then transfer answers to chart paper and present to the whole group.
- Have students work in 5 different groups. Post each SOLVE problem on a chart around the room. Students can start at one poster and complete the S step. After a few minutes, have student groups move to the next poster, read the S step, and then complete the O step. After a few minutes, have students move to the next poster, read the S and O steps, and complete the L step. Continue with this procedure until student groups have returned to their original problem. They can also present their problem to the whole group.
- Have a copy of one of the SOLVE problems at each table or group (5 groups). Have students complete the S Step and then pass the problem on to the next group when you give a signal. Students will continue this process until they get back their original problem.

If time permits… **(CP, IP) S147 (Answers on T298.)**

Have students complete Problems 1–10 on S147.

[Closure]

To wrap up the lesson, go back to the essential questions and discuss them with students.

- Why is it important to know how to add decimals? *(Answers will vary, but dealing with money is an example of an appropriate answer.)*
- Why is it important to know how to subtract decimals? *(Answers will vary, but dealing with money is an example of an appropriate answer.)*
- How can you add and subtract decimals with different place values? *(Use 0 as a place holder, so that the decimals have the same number of place values.)*

[Homework] Assign S148 for homework. (Answers on T299.)

[Quiz Answers] T300

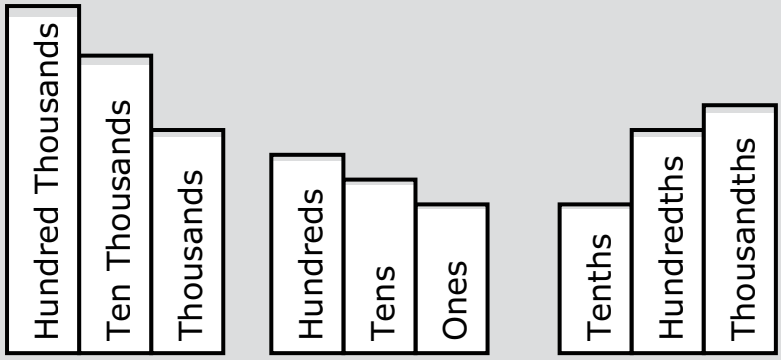
1. **D** 2. **B** 3. **A** 4. **C** 5. **C** 6. **B** 7. **D** 8. **D** 9. **C** 10. **A**

The quiz can be used at any time as extra homework or to see how students progress on adding and subtracting with decimals in mathematical and real-world situations.

Here is the key to **S134.**

Warm–Up

Directions: Use the following place-value chart for Questions 1–5.



Use the number 198,673.402 to answer Questions 1–5.

1. What is the place of the 6? **hundreds**
2. What is the place of the 7? **tens**
3. What is the place of the 9? **ten thousands**
4. What is the place of the 3? **ones**
5. What is the place of the 4? **tenths**

6. Write the number, using the following clues:

5	9	5	,	4	8	7	.	8	6	3

There are 4 hundreds.
A 9 is in the ten thousands place.
There are 6 hundredths.
There 80 ones.
An 8 is in the tenths place.
A 5 is in the hundred thousands place and the thousands place.
Place a 7 in the ones place.
There are 3 thousandths.

Here is the key to **S135**.

Directions: Complete the following SOLVE problem with your teacher. You will only complete the S step.

Mario and Eugene ran a test lap at the track. They do this every day to compare the time it takes them to run laps. If Mario ran the lap in 2.049 minutes, and Eugene ran the lap in 2.409 minutes, what is the difference in the times they ran?

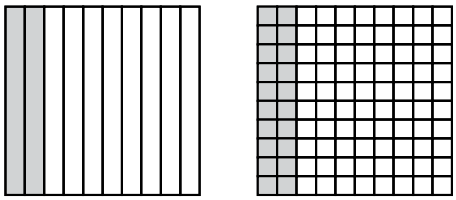
S Underline the question.
This problem is asking me to find **the difference in the times the boys ran the lap.**

Directions: Complete this page with your teacher and partner.

Look at the following pictorial models. Each one represents one whole.

1. Look at the first model. Into how many sections is it divided? **10**

2. Each section is equal to what fractional part of the whole? **one tenth**



0.2 = 0.20

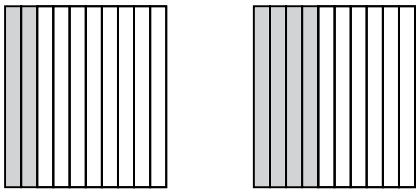
3. Each ▯ represents one tenth of the model. How would this be written as a decimal? **0.1**

4. Each □ equals one out of 100. How would this be written as a decimal? **0.01**

5. Shade in 0.2 in the first model. Shade in 0.20 in the second model. How do these two pictorial representations compare? **They are equal.**

Look at the following models.

6. Shade in 0.2 in the first model. Shade in 0.4 in the second model. If the two shaded decimal models, or addends, were added together, what would the sum be written as a decimal? **0.6** Write this as a decimal number sentence.
Two tenths plus four tenths is equal to six tenths.

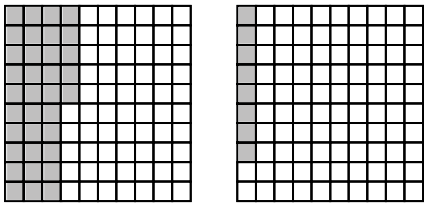


0.2
+ 0.4
0.6

Look at the following models.

7. Shade in 0.35 in the first model. Shade in 0.08 in the second model. If the two shaded decimal models, or addends, were added together, what would the sum be written as a decimal? **0.43** Write this as a decimal number sentence.

Thirty-five hundredths plus eight hundredths equals forty-three hundredths.

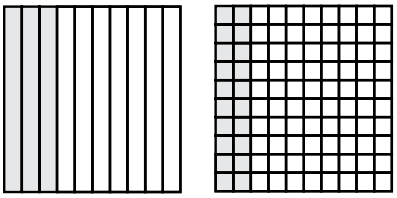


0.35
+ 0.08
0.43

Here is the key to **S136.**

Directions: Complete this page with your teacher and partner.

Look at the following models.



1. Shade in 0.3 in the first model. Shade in 0.20 in the second model. Compare the models. **The square models represent equal amounts of space.**

2. Use the model above to fill in the chart below.

	Ones	.	Tenths	Hundredths
	0	**.**	**3**	**0**
	0	**.**	**2**	**0**
Sum	**0**	**.**	**5**	**0**

3. If the two shaded decimal models, or addends, were added together, what would the sum be? **0.5 or 0.50**

4. Write this as a decimal number sentence, as your teacher models.

$$\begin{array}{r} 0.30 \\ +\ 0.20 \\ \hline 0.50 \end{array}$$

Thirty hundredths plus twenty hundredths is equal to fifty hundredths.

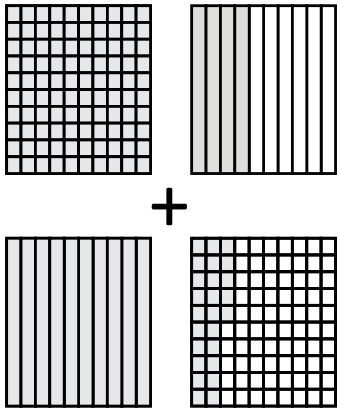
5. If 0.50 is equal to **0.5**, 0.20 is equal to **0.2** and 0.30 is equal to **0.3**, how could you write the decimal number sentence that is equivalent to the one in Question 4 using tenths?

Three tenths plus two tenths is equal to five tenths.

Here is the key to **S137.**

Directions: Complete this page with your teacher and partner.

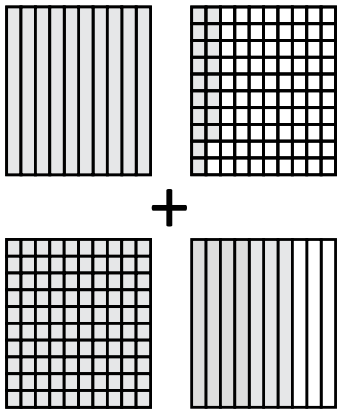
1.



	Ones	.	Tenths	Hundredths
	1	.	**4**	**0**
	1	.	**2**	**5**
Sum	**2**	.	**6**	**5**

1.40
+ 1.25
2.65

2.



	Ones	.	Tenths	Hundredths
	1	.	**1**	**8**
	1	.	**7**	**0**
Sum	**2**	.	**8**	**8**

1.18
+ 1.70
2.88

3. 0.51 + 0.236 =

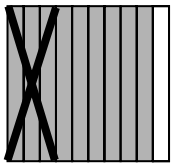
	Ones	.	Tenths	Hundredths	Thousandths
	0	.	**5**	**1**	**0**
	0	.	**2**	**3**	**6**
Sum	**0**	.	**7**	**4**	**6**

0.510
+ 0.236
0.746

Here is the key to **S138.**

Directions: Complete this page with your teacher and partner.

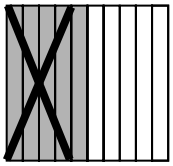
Use the following models to answer the questions.



1. Shade 0.9 in the model. Cross out 0.3. How many shaded tenths are left? **0.6** Write what you did as a subtraction problem as your teacher models.

0.9
- 0.3
0.6

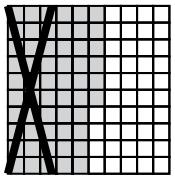
What do you know about decimals when subtracting?
The decimal points must be lined up.



2. Shade 0.5 in the model. Cross out 0.4. How many shaded tenths are left? **0.1** Write what you did as a subtraction problem as your teacher models.

0.5
- 0.4
0.1

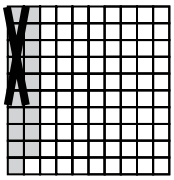
What do you know about decimals when subtracting?
The decimal points must be lined up.



3. Shade 0.56 in the model. Cross out 0.30. How many shaded hundredths are left? **0.26** Write what you did as a subtraction problem as your teacher models.

0.56
- 0.30
0.26

What do you know about decimals when subtracting?
The decimal points must be lined up.



4. Shade 0.19 in the model. Cross out 0.05. How many shaded hundredths are left? **0.14** Write what you did as a subtraction problem as your teacher models.

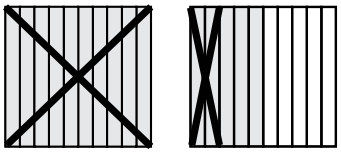
0.19
- 0.05
0.14

What do you know about decimals when subtracting?
The decimal points must be lined up.

Here is the key to **S139.**

Directions: Complete this page with your teacher and partner.

Look at the following model. It represents a whole number and a decimal.

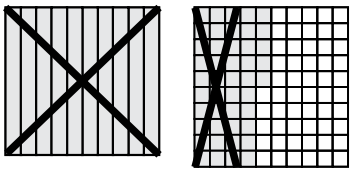


1. What number does the model represent? **1.5** Cross out 1.2. How many shaded tenths are left? **3** Write what you did as a subtraction problem.

1.5
- 1.2
0.3

What do you know about decimals when subtracting?
The decimal points must be lined up.

Use the following model to solve the problem.



2. Shade in 1.45 in the model. Cross out 1.3. How many shaded hundredths are left? **0.15** Write what you did as a subtraction problem as your teacher models.

1.45
- 1.30
0.15

What do you know about decimals when subtracting?
The decimal points have to line up.

What did you have to do to the number written as tenths to be able to subtract the decimals? **Add a 0 to hold the place.**

Solve the following problems without models. Rewrite to line up the decimals.

3. 0.029 – 0.01 = **0.029** **- 0.010** **0.019**	**4**. 3.3 – 1.131 = **3.300** **- 1.131** **2.169**
5. 0.89 – 0.089 = **0.890** **- 0.089** **0.801**	**6.** 2.859 – 0.03 = **2.859** **- 0.030** **2.829**

LESSON 13: Add and Subtract with Decimals

Here is the key to **S140.**

Directions: Complete the following decimal problems.

Rewrite problems in the space provided to line up decimals.

1. 0.8 – 0.2 = **0.8** − **0.2** = **0.6**	**2.** 2.19 + 1.8 = **2.19** + **1.80** = **3.99**
3. 2.45 – 1.3 = **2.45** − **1.30** = **1.15**	**4.** 4.3 – 2.09 = **4.30** − **2.09** = **2.21**
5. 0.04 + 0.215 = **0.040** + **0.215** = **0.255**	**6.** 5.39 – 1.081 = **5.390** − **1.081** = **4.309**
7. 5.25 + 3.6 = **5.25** + **3.60** = **8.85**	**8.** 0.9 – 0.271 = **0.900** − **0.271** = **0.629**
9. 1.07 + 2.593 = **1.070** + **2.593** = **3.663**	**10.** 0.081 + 2.7 = **0.081** + **2.700** = **2.781**

Here is the key to **S141**.

Directions: Complete the following SOLVE problem with your teacher.

~~Mario and Eugene ran a test lap at the track.~~ | ~~They do this every day to compare the time it takes them to run laps.~~ | If Mario ran the lap in 2.049 minutes, | and Eugene ran the lap in 2.409 minutes, | what is the difference in the times they ran?

S Underline the question.

This problem is asking me to find **the difference in the times the boys ran the lap.**

O Identify the facts.

Eliminate the unnecessary facts.

List the necessary facts. **Mario's time: 2.049 minutes**

Eugene's time: 2.409 minutes

L Write in words what your plan of action will be. **Subtract Mario's time from Eugene's time.**

Choose an operation or operations. **Subtraction**

V Estimate your answer. **About 0.4 minutes**

Carry out your plan.

2.409 – 2.049 = 0.36 minutes

$$\begin{array}{r} 2.409 \\ -\ 2.049 \\ \hline 0.360 \end{array}$$

E Does your answer make sense? (Compare your answer to the question.)

Yes, because we are looking for the difference of time.

Is your answer reasonable? (Compare your answer to the estimate.)

Yes, because it is close to our estimate of about 0.4 minutes.

Is your answer accurate? (Check your work.) **Yes**

Write your answer in a complete sentence.

The difference in the times Mario and Eugene ran the laps is 0.36 minutes.

Here is the key to **S142**.

Directions: Complete the following SOLVE problem.

~~In gym class, students had to run for 20 minutes.~~ | During the 20-minute run, Carlos ran 2.34 miles|, and Brooke ran 2.19 miles. | How much farther did Carlos run during the 20 minutes?

S Underline the question.

This problem is asking me to find **the difference between Carlos' distance and Brooke's distance for the run.**

O Identify the facts.

Eliminate the unnecessary facts.

List the necessary facts. **Carlos ran 2.34 miles, Brooke ran 2.19 miles**

L Write in words what your plan of action will be. **Subtract the distance Brooke ran from the distance Carlos ran.**

Choose an operation or operations. **Subtraction**

V Estimate your answer. **About 0.15 miles**

Carry out your plan.

$$\begin{array}{r} 2.34 \\ -\ 2.19 \\ \hline 0.15 \text{ miles} \end{array}$$

E Does your answer make sense? (Compare your answer to the question.)

Yes, I found the difference between the two runners' distances.

Is your answer reasonable? (Compare your answer to the estimate.)

Yes, the answer matches my estimate of 0.15 miles.

Is your answer accurate? (Check your work.) **Yes**

Write your answer in a complete sentence.

The difference between Carlos' run and Brooke's run is 0.15 miles.

Here is the key to **S143**.

Directions: Complete the following SOLVE problem.

Penny has $1426.78 in her checking account. | She pays her rent which is $725. | She deposits a check for $35.00 |and then uses her debit card at the mall to buy a new coat for $59.99. | What is the balance of her account?

S Underline the question.

This problem is asking me to find **the balance in Penny's account.**

O Identify the facts.

Eliminate the unnecessary facts.

List the necessary facts. **Has $1426.78 in her account, pays rent - $725, deposits a check - $35, buys a coat - $59.99**

L Write in words what your plan of action will be. **Add the deposit to the amount in her account. Add the rent plus the cost of the coat. Subtract the amount spent from the amount in the account.**

Choose an operation or operations. **Addition, subtraction**

V Estimate your answer. **About $700**

Carry out your plan.

1426.78 + 35 = 1461.78; 725 + 59.99 = 784.99; 1461.78 – 784.99 = $676.79

E Does your answer make sense? (Compare your answer to the question.)

Yes, because I found the balance in the checking account.

Is your answer reasonable? (Compare your answer to the estimate.)

Yes, because it is close to my estimate of about $700.

Is your answer accurate? (Check your work.) **Yes**

Write your answer in a complete sentence.

The balance in Penny's account is $676.79.

Here is the key to **S144**.

Directions: Complete the following SOLVE problem.

~~Aaron is on the track team.~~ | ~~He goes to practice every day after school.~~ | ~~He is training to run the 200-meter dash.~~ | His best time so far is 32.45 seconds. | He wants to improve his time to 28 seconds. | How much does he need to decrease his time in order to meet his goal?

S Underline the question.

This problem is asking me to find **the amount he needs to decrease his time in order to meet his goal of 28 seconds.**

O Identify the facts.

Eliminate the unnecessary facts.

List the necessary facts. **Best time is 32.45 seconds; goal is 28 seconds**

L Write in words what your plan of action will be. **Subtract the time of his goal from his current time.**

Choose an operation or operations. **Subtraction**

V Estimate your answer. **About 4 seconds**

Carry out your plan.

32.45 – 28 = 4.45 seconds

E Does your answer make sense? (Compare your answer to the question.)

Yes, because he found the difference from his current time to his goal time.

Is your answer reasonable? (Compare your answer to the estimate.)

Yes, because it is close to my estimate of about 4 seconds.

Is your answer accurate? (Check your work.) **Yes**

Write your answer in a complete sentence.

Aaron needs to decrease his time by 4.45 seconds to meet his goal.

Here is the key to **S145**.

Directions: Complete the following SOLVE problem.

~~Mr. Carson was going on a business trip.~~ | ~~At the airport, he stopped at a shop to purchase a few items before getting on the plane.~~ | Mr. Carson bought a book for $8.95, | a magazine for $4.49, | and a candy bar for $1.09. | How much did he spend at the airport shop?

S Underline the question.

This problem is asking me to find **the amount he spent at the airport shop.**

O Identify the facts.

Eliminate the unnecessary facts.

List the necessary facts. **Bought a book for $8.95, bought a magazine for $4.49, bought a candy bar for $1.09**

L Write in words what your plan of action will be. **Add the cost of the book, the magazine, and the candy bar.**

Choose an operation or operations. **Addition**

V Estimate your answer. **About $15.00**

Carry out your plan.

8.95 + 4.49 + 1.09 = $14.53

E Does your answer make sense? (Compare your answer to the question.)

Yes, because we are looking for the amount he spent.

Is your answer reasonable? (Compare your answer to the estimate.)

Yes, it is close to our estimate of about $15.00.

Is your answer accurate? (Check your work.) **Yes**

Write your answer in a complete sentence.

Mr. Carson spent $14.53 at the airport shop.

Here is the key to **S146**.

Directions: Complete the following SOLVE problem.

~~Mrs. Jensen went to the store to buy some supplies for her classroom.~~ | She had $40.00 to spend. | She bought a stapler for $8.25, | two packs of construction paper for $2.99 each, | and three packs of colored pencils for $2.69 each. | When she went shopping, it was a tax-free weekend. | How much change did Mrs. Jensen receive from her $40.00?

S Underline the question.

This problem is asking me to find **the change Mrs. Jensen received from her $40.00.**

O Identify the facts.

Eliminate the unnecessary facts.

List the necessary facts. **Bought a stapler for $8.25, two packs of construction paper for $2.99 each, three packs of colored pencils for $2.69 each, no tax, had $40.00.**

L Write in words what your plan of action will be. **Multiply the cost of paper by the packs of paper. Multiply the cost of pencils by the packs of pencils. Add the cost of the stapler, paper, and pencils. Subtract the total from the money that Mrs. Jones had.**

Choose an operation or operations. **Multiplication, addition, subtraction**

V Estimate your answer. **About $17.00**

Carry out your plan.

(2.99 • 2) = 5.98; (2.69 • 3) = 8.07; 8.25 + 5.98 + 8.07 = 22.30
40.00 – 22.30 = 17.70 = $17.70

E Does your answer make sense? (Compare your answer to the question.)

Yes, because we found the amount of change Mrs. Jensen received.

Is your answer reasonable? (Compare your answer to the estimate.)

Yes, my answer is close to my estimate of about $17.00.

Is your answer accurate? (Check your work.) **Yes**

Write your answer in a complete sentence.

Mrs. Jensen received $17.70 in change from her $40.00.

Here is the key to **S147**.

Directions: Complete the following decimal problems.

1. 1.34 – 1.034 =
0.306

2. 0.7 – 0.29 =
0.41

3. 0.5 – 0.498 =
0.002

4. 0.079 + 0.79 =
0.869

5. 0.3 + 0.29 =
0.59

6. 6.602 – 3.593 =
3.009

7. 0.58 + 0.311 =
0.891

8. 4.3 + 7.587 =
11.887

9. Tianna is going on a trip to visit her grandmother. Her suitcase must weigh less than 50 pounds. She packs her suitcase, and the weight is 47.35 pounds. Her mom forgot to pack a gift she was sending with Tianna. The gift weighs 4.65 pounds. Will her luggage be over the weight limit?
Yes, her luggage will weight 52 pounds.

10. Rachel has $183.75 in her checking account. She writes a check for $58.98 at the grocery store and withdraws $20 to spend at the mall. How much money is left in her checking account?
Rachel has $104.77 left in her checking account.

Here is the key to **S148**.

Homework

Name _____ **Date** _____

Directions: Solve the following problems involving decimals.

1. 0.045 – 0.009 =
0.036

2. 0.8 – 0.09 =
0.71

3. 3.07 + 4.6 =
7.67

4. 0.4 + 0.298 =
0.698

5. 0.3 - 0.097 =
0.203

6. 0.89 + 0.107 =
0.997

7. 0.35 + 0.203 =
0.553

8. 9.25 – 6.019 =
3.231

9. Daniel is working hard to improve his grade in math. His goal is to have a total of 145 points for the quarter so that he can earn a B on his report card. His quiz total is 89 points, and his homework total is 23.5 points. How many more points does he need to earn to reach his goal of 145 points?
Daniel needs to earn 32.5 more points to reach his goal.

10. Kathy is going out to lunch with her friend, Martha. They share a pizza that costs $8.99, and each have a drink that costs $2.29. What is the total cost of the lunch, not including tax or tip?
The total cost of lunch is $13.57.

Name _____ Date _____

Quiz

1. 0.395 + 0.6 =

A. 0.394
B. 0.485
C. 0.895
D. 0.995

2. 0.03 + 0.259 =

A. 0.262
B. 0.289
C. 0.299
D. 0.589

3. 4.32 – 2.23 =

A. 2.09
B. 2.11
C. 2.9
D. 2.91

4. 0.7 – 0.097 =

A. 0.503
B. 0.509
C. 0.603
D. 0.9

5. 0.78 + 0.004 =

A. 0.478
B. 0.487
C. 0.784
D. 7.840

6. 0.09 – 0.02 =

A. 0.02
B. 0.07
C. 0.29
D. 0.79

7. 0.23 + 0.09 =

A. 0.14
B. 0.22
C. 0.24
D. 0.32

8. 8.9 + 6.05 =

A. 14.14
B. 14.91
C. 14.94
D. 14.95

9. Christina went shopping and bought a new shirt for $15.47, a pair of shoes for $14.99, and a belt for $6.02. How much money did she spend all together?

A. $21.49
B. $30.46
C. $36.48
D. $36.66

10. Barry is 64.39 inches tall. Carmen is 66.71 inches tall. How much taller is Carmen than Barry?

A. 2.32 inches
B. 13.11 inches
C. 131.1 inches
D. 232 inches