

Name _____



Howard University

4th Grade Math

Remote Learning Packet

October 19th-23rd

Name: _____
BCCSG

Date: 10/19/2020
Howard

Lesson 13

Learning Target: I can use place value understanding to decompose to smaller units once using the standard subtraction algorithm, and apply the algorithm to solve word problems using tape diagrams.

Do Now

Jennifer texted 5,849 times in January. In February, she texted 1,263 more times than in January. What was the total number of texts that Jennifer sent in the two months combined? (Hint: Use tape diagrams to help you.)

Input

Use a place value chart and place value disks to model subtracting alongside the algorithm, regrouping 2 hundred into 10 tens.

1. $4,259 - 2,171$

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Look at our tape diagram. What is the whole? The whole is _____, Let's record that above the tape diagram as the whole. What is the known part? It is _____. Label that under your tape. Label the unknown part as A. Model the whole, _____, using place value disks in your place value chart. Do we model the part we are subtracting? _____, we only model the _____. First, let's determine

if we are ready to subtract. We look across the top number, from right to left, to see if there are enough units in each column. Look at the ones column: are there enough ones in the top number to subtract the ones in the bottom number. _____, 9 is greater than 1. This means we are ready to subtract in the ones column. Let's look at the _____ column. Are there enough tens in the top number to subtract the tens in the bottom number? _____, 5 is less than 7. We _____ or unbundle 1 unit from the hundreds to make 10 tens. I now have _____ hundred and _____ tens. Let's rename and represent the change in writing using the algorithm. I now have 1 hundred and 15 tens. Are there enough hundreds in the top number to subtract the thousands in the bottom number? _____, 1 is equal to 1. Are there enough thousands in the top number to subtract the thousands in the bottom number? _____, we are ready to subtract. 9 ones minus 1 one equals _____. Cross off one disk. 15 tens minus 7 tens equals _____. Cross off 7 disks. Say the number sentence: _____ - _____ = 2,088. The value of A in our tape diagram is 2,088. We write $A=2,088$ below the tape diagram. What can be _____ to 2,171 to result in the sum of 4,529? That's right, _____!

2. Let's try $6,314 - 3,133$

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Regroup 1 thousand into 10 hundreds using the subtraction algorithm.

3. $23,422 - 11,510$

4. The library has 50,819 books. 4,056 are checked out. How many books remain in the library?

Solve a subtraction word problem, regrouping 1 ten thousand into 10 thousands.

3. The paper mill produced 73, 658 boxes of paper. 8,052 boxes have been sold. How many boxes remain?

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Lesson 14

Learning Target: I can use place value understanding to decompose to smaller units multiple times in any place using the standard subtraction algorithm, and apply the algorithm to solve word problems using tape diagrams.

Do Now

In one year, the animal shelter bought 25,460 pounds of dog food. That amount was 10 times the amount of cat food purchased in the month of July. How much cat food was purchased in July?

Input

Subtract, decomposing twice.

1. $22,397 - 3,745$

Write this problem vertically on your white board. Watch as I draw a tape diagram, labeling the _____, the known part, and the _____ part using a variable, A. Look across the digits. Am I ready to subtract? Look across the top number to see if I have enough units in each _____. Are there enough _____ in the top number to subtract the ones in the bottom number? Yes, _____ ones is greater than _____ ones. Are there enough tens in the top number to subtract the tens in the bottom number? Yes, _____ tens is greater than _____ tens. Are

there enough hundreds in the top number to subtract the hundreds in the bottom number?

_____, 3 hundreds is less than ____ hundreds. We can unbundle 1 thousand as _____

hundreds to make 1 thousand and 13 _____. I can subtract the hundreds column now!

Watch as I record this. Now, it is your turn to record the change. Are there enough thousands in the

top number to subtract the thousands in the bottom number? No, 1 _____ is less than 3

thousands. We can unbundle 1 ten thousand to 10 _____ to make 1 ten thousand and 11

thousands. I can subtract the thousands column now. Watch as I record this. Now, it is your turn to

record the change. Are there enough ten thousands in the top number to subtract the ten

thousands in the bottom number? _____. Say the equation with me: $22,397 \text{ mins } 3,745 \text{ equals } 18,652$.

18, 652.

Subtract, decomposing three times.

2. Write $210,290 - 45,720$ vertically on your white board.

Use the subtraction algorithm to solve a word problem modeled with a tape diagram, decomposing units 3 times.

3. Bryce needed to purchase a large order of computer supplies for his company. He was allowed to spend \$859, 239 on computers. However, he ended up only spending \$272,650. How much money was left?

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Lesson 15

Learning Target: I can use place value understanding to fluently decompose to smaller units multiple times in any place using the standard subtraction algorithm, and apply the algorithm to solve word problems using tape diagrams.

Input

Problem 1: Decompose numbers from 1 thousand into smaller units to subtract, modeled with place value disks.

$$\begin{array}{r} 1,000 \\ - \underline{528} \end{array}$$

Tape Diagram:

thousands	hundreds	tens	ones

Check to see if we are ready to subtract. Are there enough **ones**? Yes / No

Can we unbundle 1 unit from the tens? Yes / No

Look to the hundreds. Can we unbundle 1 unit from the hundreds? Yes / No

In order to get to 10 tens, we need to regroup 1 _____.

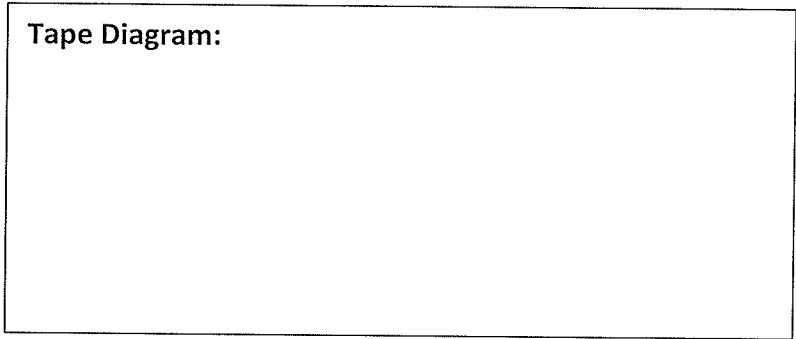
Model with place value disks on your chart like Ms. Sheridan.

_____ - _____ = _____ or **P** = _____

Problem 2: Decompose numbers from 1 million into smaller units to subtract, modeled with place value disks.

$$\begin{array}{r} 1,000,000 \\ - \underline{345,528} \end{array}$$

Tape Diagram:



Check to see if we are ready to subtract. Are there enough **ones**? Yes / No

Can we unbundle 1 unit from the tens? Yes / No

Look to the hundreds. Can we unbundle 1 unit from the hundreds? Yes / No

In order to get to 10 tens, we need to regroup 1 _____.

Use the place value chart on your whiteboard to model with place value disks like Ms. Sheridan.

$$\underline{\hspace{2cm}} - \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ or } P = \underline{\hspace{2cm}}$$

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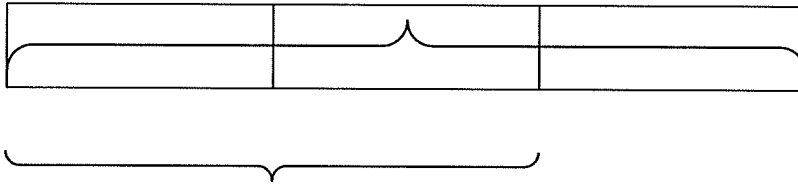
Lesson 16 – Part 1

Learning Target: I can solve two-step word problems using the standard subtraction algorithm fluently modeled with tape diagrams, and assess the reasonableness of answers using rounding.

Input

Problem 1: Solve a two-step word problem, modeled with a tape diagram, assessing reasonableness of the answer using rounding.

A company has 3 locations with 70,010 employees altogether. The first location has 34,857 employees. The second location has 17,595 employees. How many employees work in the third location?



_____ is the whole. _____ is a part. _____ is a part.

What is unknown in this problem? Circle one: Part Whole

Use the variable E to represent it.

Before solving, estimate to get a sense for what our answer will be. Round each number to the nearest **ten thousand** and solve.

+ _____ - _____

Estimated number of employees: _____

Now, solve to find the precise number of employees.

+ _____ - _____

Compare with your estimate. Are the answers close to each other? Yes / No
 Is your answer reasonable? Yes / No

Answer as a sentence: _____

Problem 2: Solve two-step word problems, modeled with a tape diagram, assessing reasonableness of the answer using rounding.

Owen’s goal is to have 1 million people visit his new website within the first four months of it being launched. Below is a chart showing the number of visitors each month. How many more visitors does he need in Month 4 to reach his goal?

Month	Month 1	Month 2	Month 3	Month 4
Visitors	228,211	301,856	299,542	

Tape Diagram:

_____ is the whole. _____ is a part. _____ is a part.

What is unknown in this problem? Circle one: Part Whole

Use the variable *E* to represent it.

Before solving, estimate to get a sense for what our answer will be. Round each number to the nearest **hundred thousand** and solve.

+ _____ - _____

Estimated number of visitors: _____

Now, solve to find the precise number of visitors.

$$+ \underline{\hspace{2cm}} \qquad - \underline{\hspace{2cm}}$$

Compare with your estimate. Are the answers close to each other? Yes / No
Is your answer reasonable? Yes / No

Answer as a sentence: _____

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Lesson 16 – Part 2

Learning Target: I can solve two-step word problems using the standard subtraction algorithm fluently modeled with tape diagrams, and assess the reasonableness of answers using rounding.

Do Now

Solve the problem using a tape diagram. Estimate your answer first to make sure it will be reasonable!

Three stores sold 21,353 flowers altogether. The first store sold 3,245 flowers. The second store sold 4,732 flowers. How flowers did the third store sell?

Tape Diagram:

Estimated number of flowers: _____

Actual number of flowers: _____

Input

