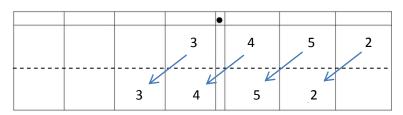
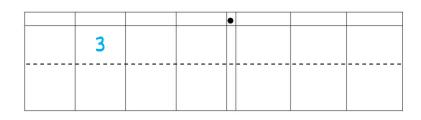
Name _____

Date _____

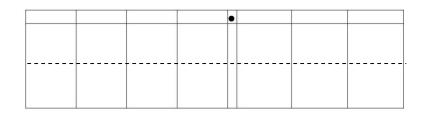
- 1. Record the digits of the first factor on the top row of the place value chart. Draw arrows to show how the value of each digit changes when you multiply. Record the product on the second row of the place value chart. The first one has been done for you.
 - a. 3.452 x 10 = <u>34.52</u>



b. 3.452 x 100 = _____



c. 3.452 x 1000 = _____



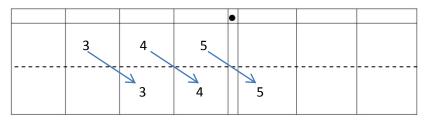
d. Explain how and why the value of the 5 changed in (a), (b), and (c).



Reason concretely and pictorially using place value understanding to relate adjacent base ten units from millions to thousandths. 5/7/13



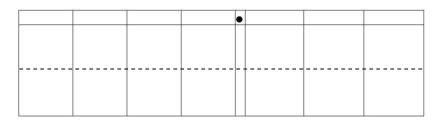
- 2. Record the digits of the dividend on the top row of the place value chart. Draw arrows to show how the value of each digit changes when you divide. Record the quotient on the second row of the place value chart. The first one has been done for you.
 - a. 345 ÷ 10 = <u>34.5</u>



b. 345 ÷ 100 =_____

| | | • | | |
|------|------|---|------|--|
| | | | | |
| | | | | |
| | | - | | |
| | | | | |
| | | | | |
| | | | | |

c. 345 ÷ 1000= ___



d. Explain how and why the value of the 4 changed in the quotients in (a), (b), and (c).



Reason concretely and pictorially using place value understanding to relate adjacent base ten units from millions to thousandths. 5/7/13



3. A manufacturer made 7,234 boxes of coffee stirrers. Each box contains 1000 stirrers. How many stirrers did they make? Explain your thinking and include a statement of the solution.

4. A student used his place value chart to show a number. After the teacher instructed him to multiply his number by 10, the chart showed 3200.4. Draw a picture of what the place value chart looked like at first.

| | | • | | |
|--|--|---|--|--|
| | | | | |
| | | | | |

a. Explain how you decided what to draw on your place value chart. Be sure to include your reasoning about how the value of the digits was affected by the multiplication. Use words, pictures, or numbers.

5. A microscope has a setting that magnifies an object so that it appears 100 times as large when viewed through the eyepiece. If a tiny insect is 0.095 cm long, how long will the insect appear in centimeters through the microscope? Explain how you know.



Reason concretely and pictorially using place value understanding to relate adjacent base ten units from millions to thousandths. 5/7/13



1.A.14

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| Na | me | | | Date |
|----|-----|---|-----|-------------------------------|
| 1. | Sol | lve. | | |
| | a. | 54,000 x 10 = | e. | 0.13 x 100 = |
| | b. | 54,000 ÷ 10 = | f. | 13 ÷ 1000 = |
| | c. | 8.7 x 10 = | g. | 3.12 x 1000 = |
| | d. | 8.7 ÷ 10 = | h. | 4031.2 ÷ 100 = |
| 2. | Fin | d the products. | | |
| | a. | 19,340 x 10 = | | |
| | b. | 19,340 x 100 = | | |
| | c. | 19,340 x 1000 = | | |
| | d. | Explain how you decided on the number of zeros in the | pro | oducts for (a), (b), and (c). |
| 3. | Fin | d the quotients. | | |
| | a. | 152 ÷ 10 = | | |
| | b. | 152 ÷ 100 = | | |
| | C. | 152 ÷ 1000 = | | |

d. Explain how you decided where to place the decimal in the quotients in (a), (b), and (c).



Reason abstractly using place value understanding to relate adjacent base ten units from millions to thousandths. 5/7/13



4. Janice thinks that 20 hundredths is equivalent to 2 thousandths because 20 hundreds is equal to 2 thousands. Use words and a place value chart to correct Janice's error.

 Canada has a population that is about 1/10 as large as the United States. If Canada's population is about 32 million, about how many people live in the United States? Explain the number of zeros in your answer.



Reason abstractly using place value understanding to relate adjacent base ten units from millions to thousandths. 5/7/13



| Na | me | | Date |
|----|--|----|-----------------------|
| 1. | Write the following in exponential form (e.g., $100 = 10^2$). | | |
| | a. 10,000 = | d. | 100 x 100 = |
| | b. 1000 = | e. | 1,000,000 = |
| | c. 10 x 10 = | f. | 1000 × 1000 = |
| 2. | Write the following in standard form (e.g., $5 \times 10^2 = 500$). | | |
| | a. $9 \times 10^3 =$ | e. | $4.025 \times 10^3 =$ |
| | b. $39 \times 10^4 =$ | f. | $40.25 \times 10^4 =$ |
| | c. $7200 \div 10^2 =$ | g. | $725 \div 10^3 =$ |
| | d. 7,200,000 \div 10 ³ = | h. | 7.2 $\div 10^2 =$ |

- 3. Think about the answers to Problem 2(a–d). Explain the pattern used to find an answer when you multiply or divide a whole number by a power of 10.
- 4. Think about the answers to Problem 2(e–h). Explain the pattern used to place the decimal in the answer when you multiply or divide a decimal by a power of 10.



Use exponents to name place value units and explain patterns in the placement of the decimal point. 5/7/13



5. Complete the patterns.

| a. | 0.03 | 0.3 | | | 30 | | | | | |
|----|---------|------|----------------|------|--------|---|------|------|-------|--|
| b. | 6,500,0 | 000 | 65 <i>,</i> 00 | 0 _ | | | 6.5 | | _ | |
| c. | | | 9,4 | 30 _ | | - | 94.3 | 9.43 | | |
| d. | 999 | 9990 | 99,9 | 900 | | | | | | |
| e. | | | 7.5 | 750 | 75,000 | _ | | | | |

- f. Explain how you found the missing numbers in set (b). Be sure to include your reasoning about the number of zeros in your numbers and how you placed the decimal.
- g. Explain how you found the missing numbers in set (d). Be sure to include your reasoning about the number of zeros in your numbers and how you placed the decimal.
- 6. Shaunnie and Marlon missed the lesson on exponents. Shaunnie incorrectly wrote $10^5 = 50$ on her paper, and Marlon incorrectly wrote $2.5 \times 10^2 = 2.500$ on his paper.
 - a. What mistake has Shaunnie made? Explain using words, numbers, and pictures why her thinking is incorrect and what she needs to do to correct her answer.
 - b. What mistake has Marlon made? Explain using words, numbers, and pictures why his thinking is incorrect and what he needs to do to correct his answer.



Use exponents to name place value units and explain patterns in the placement of the decimal point. 5/7/13



1.A.40

| Na | me _ | | Date | | | | |
|--|------|----------------------------------|------|----|--|--|--|
| 1. Convert using an equation with an exponent. | | | | | | | |
| | | | | | | | |
| | a. | 3 meters to centimeters | = | cm | | | |
| | b. | 900 centimeters to meters | = | m | | | |
| | | | | | | | |
| | с. | 8.1 liters to milliliters | = | ml | | | |
| | d. | 537 milliliters to liters | = | I | | | |
| | | | | | | | |
| | e. | 90.5 kilometers to meters | = | m | | | |
| | f. | Convert 23 meters to kilometers. | = | km | | | |
| | | | | | | | |
| | g. | 0.4 kilograms to grams | = | g | | | |
| | h. | 80 grams to kilograms | = | kg | | | |

- i. Circle the conversion factor in each equation above. Explain why converting from meters to centimeters uses a different conversion factor than converting from liters to milliliters, kilometers to meters, and kilograms to grams.
- 2. Read each aloud as you write the equivalent measures.
 - a. 3.5 km = _____ km _____ m
 - b. 1.23 l = _____ l _____ ml
 - c. 2.002 kg = ____kg ____g
 - d. 3 ml = _____ l
 - e. 3012 g = _____ kg
 - f. _____ m = 2.10 cm



Use exponents to denote powers of 10 with application to metric conversions. 5/7/13



3. The length of the bar for a high jump competition must always be 4.75 m. Express this measurement in millimeters. Explain your thinking using an equation that includes an exponent.

- 4. A honey bee's length measures 1 cm. Express this measurement in meters.
 - a. Explain your thinking using a place value chart.

b. Explain your thinking using an equation that includes an exponent.

5. James drinks 800 ml of water each day during his workout. Henry drinks 600 ml daily during his workout. If James works out 3 days each week, and Henry works out 5 days each week, how many liters do the boys drink in all each week while working out?



Use exponents to denote powers of 10 with application to metric conversions. 5/7/13



6. Katrina needs to tie ribbons around 10 flower arrangements for a party. Each arrangement requires 1.2 m of ribbon. She also needs 325 cm of ribbon to tie to the balloons for the party. If Katrina buys 15 m of ribbon, will she have enough? If so, how much ribbon (in meters) will she have left? If not, how many more meters of ribbon will she need to buy?



Use exponents to denote powers of 10 with application to metric conversions. 5/7/13



Name _____

Date _____

1. Express as decimal numerals. The first one is done for you.

| a. | four thousandths | 0.004 |
|----|---|-------|
| b. | twenty-four thousandths | |
| с. | one and three hundred twenty-four thousandths | |
| d. | six hundred eight thousandths | |
| e. | six hundred and eight thousandths | |
| f. | 46 1000 | |
| g. | 3 ⁹⁴⁶ / ₁₀₀₀ | |
| h. | $200\frac{904}{1000}$ | |

2. Express in words.

- a. 0.005
- b. 11.037
- c. 403.608
- 3. Write the number on a place value chart then write it in expanded form using fractions or decimals to express the decimal place value units. The first one is done for you.
 - a. 35.827

| tens | ones | | tenths | hundredths | thousand ths |
|------|------|---|--------|------------|--------------|
| 3 | 5 | • | 8 | 2 | 7 |

$$35.827 = 3 \times 10 + 5 \times 1 + 8 \times \left(\frac{1}{10}\right) + 2 \times \left(\frac{1}{100}\right) + 7 \times \left(\frac{1}{1000}\right) \quad or$$
$$= 3 \times 10 + 5 \times 1 + 8 \times 0.1 + 2 \times 0.01 + 7 \times 0.001$$



Name decimal fractions in expanded, unit, and word forms by applying place value reasoning. 5/7/13



b. 0.249

c. 57.281

- 4. Write a decimal for each of the following. Use a place value chart to help if necessary.
 - a. $7 \times 10 + 4 \times 1 + 6 \times \left(\frac{1}{10}\right) + 9 \times \left(\frac{1}{100}\right) + 2 \times \left(\frac{1}{1000}\right)$
 - b. $5 \times 100 + 3 \times 10 + 8 \times 0.1 + 9 \times 0.001$
 - c. $4 \times 1000 + 2 \times 100 + 7 \times 1 + 3 \times \left(\frac{1}{100}\right) + 4 \times \left(\frac{1}{1000}\right)$
- 5. Mr. Pham wrote 2.619 on the board. Christy says its two and six hundred nineteen thousandths. Amy says its 2 ones 6 tenths 1 hundredth 9 thousandths. Who is right? Use words and numbers to explain your answer.



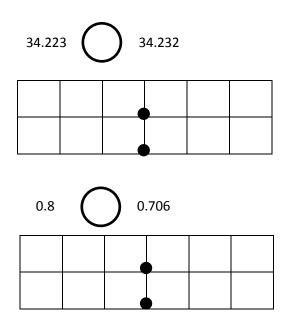
Name decimal fractions in expanded, unit, and word forms by applying place value reasoning. 5/7/13



Name _____

Date _____

1. Show the numbers on the place value chart using digits. Use >, <, or = to compare. Explain your thinking to the right.



2. Use >, <, or = to compare the following. Use a place value chart to help if necessary.

| a. 16.3 | \bigcirc | 16.4 |
|-----------------------|------------|------------------------|
| b. 0.83 | \bigcirc | $\frac{83}{100}$ |
| C. $\frac{205}{1000}$ | \bigcirc | 0.205 |
| d. 95.580 | \bigcirc | 95.58 |
| e. 9.1 | \bigcirc | 9.099 |
| f. 8.3 | Ó | 83 tenths |
| g. 5.8 | \bigcirc | Fifty-eight hundredths |





| h. | Thirty-six and nine thousandths | \bigcirc | 4 tens |
|----|--|------------|------------------------------|
| i. | 202 hundredths | Ó | 2 hundreds and 2 thousandths |
| j. | One hundred fifty-eight thousandths | Ó | 158,000 |
| k. | 4.15 | Ó | 415 tenths |

- 3. Arrange the numbers in increasing order.
 - a. 3.049 3.059 3.05 3.04
 - b. 182.205 182.05 182.105 182.025
- 4. Arrange the numbers in decreasing order.
 - a. 7.608 7.68 7.6 7.068

b. 439.216 439.126 439.612 439.261





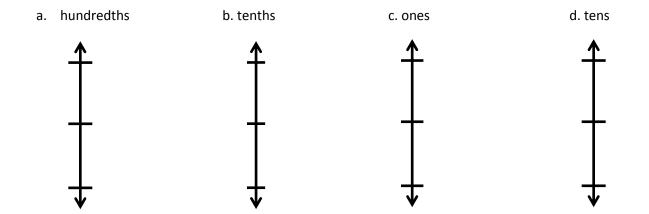
5. Lance measured 0.485 liter of water. Angel measured 0.5 liter of water. Lance said, "My beaker has more water than yours because my number has 3 decimal places and yours only has 1." Is Lance correct? Use words and numbers to explain your answer.

6. Dr. Hong prescribed 0.019 liter more medicine than Dr. Tannenbaum. Dr. Evans prescribed 0.02 less than Dr. Hong. Who prescribed the most medicine? Who prescribed the least? Explain how you know using a place value chart.





| 3. 0.994 | Tens | Ones | Tenths | Hundredths | thousandths |
|----------|------|------|--------|------------|-------------|
| | | | | | |
| | | | | | |
| | | | | | |



4. For open international competition, the throwing circle in the men's shot put must have a diameter of 2.135 meters. Round this number to the nearest hundredth to estimate the diameter. Use a number line to show your work.

5. Jen's pedometer said she walked 2.549 miles. She rounded her distance to 3 miles. Her brother rounded her distance to 2.5 miles. When they argued about it, their mom said they are both right. Explain how that could be true. Use number lines and words to explain your reasoning.



Round a given decimal to any place using place value understanding and the vertical number line. 5/7/13



1.C.11

Name _____

Date _____

- 1. Write the decomposition that helps you, and then round to the given place value. Draw number lines to explain your thinking. Circle the rounded value on each number line.
 - a. Round 32.697 to nearest tenth, hundredth, and whole number.

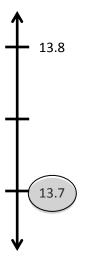
b. Round 141.999 to nearest tenth, hundredth, ten, and hundred.

2. A root beer factory produces 132,554 cases in 100 days. About how many cases does the factory produce in 1 day? Round your answer to the nearest tenth of a case. Show your thinking on the number line.



Round a given decimal to any place using place value understanding and the vertical number line. 5/7/13

- 3. A decimal number has two digits to the right of its decimal point. If we round it to the nearest tenth, the result is 13.7.
 - a. What is the maximum possible value of this number? Use words and the number line to explain your reasoning. Include the midpoint on your number line.



b. What is the minimum possible value of this decimal? Use words and the number line to explain your reasoning. Include the midpoint on your number line.



Round a given decimal to any place using place value understanding and the vertical number line. 5/7/13

| Na | me | Date |
|----|----|---|
| 1. | | ve then write your sum in standard form. You may draw a place value mat on a separate sheet to help u, if necessary. |
| | a. | 1 tenth + 2 tenths = tenths = |
| | b. | 14 tenths + 9 tenths = tenths = one(s) tenth(s) = |
| | c. | 1 hundredth + 2 hundredths = hundredths = |
| | d. | 27 hundredths + 5 hundredths = hundredths = tenths hundredths = |
| | e. | 1 thousandth + 2 thousandths = thousandths = |
| | f. | 35 thousandths + 8 thousandths = thousandths = hundredths thousandths = |
| | g. | 6 tenths + 3 thousandths = thousandths = |
| | h. | 7 ones 2 tenths + 4 tenths = tenths = |
| | i. | 2 thousandths + 9 ones 5 thousandths = thousandths = |
| | | |

2. Solve using the standard algorithm.

| a. 0.3+ 0.82 = | b. 1.03 + 0.08 = |
|----------------|-------------------|
| c. 7.3 + 2.8 = | d. 57.03 + 2.08 = |



Add decimals using place value strategies and relate those strategies to a written method. 5/7/13



| e. 62.573 + 4.328 = | f. 85.703 + 12.197 = |
|---------------------|----------------------|
| | |
| | |
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| | |
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| | |
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| | |

- 3. Van Cortlandt Park's walking trail is 1.02 km longer than Marine Park. Central Park's walking trail is 0.242 km longer than Van Cortlandt's.
 - a. Fill in the missing information in the chart below.

| New York City Walking Trails | | | | |
|------------------------------|---------|--|--|--|
| Central Park km | | | | |
| Marine Park | 1.28 km | | | |
| Van Cortlandt Park | km | | | |

b. If a tourist walked all 3 trails in a day, how many km would they have walked?

4. Meyer has 0.64 GB of space remaining on his iPod. He wants to download a pedometer app (0.24 GB) a photo app (0.403 GB) and a math app (0.3 GB). Which combinations of apps can he download? Explain your thinking.



Add decimals using place value strategies and relate those strategies to a written method. 5/7/13



| Na | me | Date |
|----|-----|--|
| 1. | Sul | ptract, writing the difference in standard form. You may use a place value chart to solve. |
| | a. | 5 tenths – 2 tenths = tenths = |
| | b. | 5 ones 9 thousandths – 2 ones = ones thousandths = |
| | c. | 7 hundreds 8 hundredths – 4 hundredths = hundreds hundredths = |
| | d. | 37 thousandths – 16 thousandths = thousandths = |

2. Solve using the standard algorithm.

| a. 1.4 – 0.7 = | b. 91.49 – 0.7 = | c. 191.49 – 10.72 = |
|-------------------|--------------------|---------------------|
| d. 7.148 – 0.07 = | e. 60.91 – 2.856 = | f. 361.31 – 2.841 = |



Subtract decimals using place value strategies and relate those strategies to a written method. 5/7/13

1.D.21

3. Solve.

| a. | 10 tens – 1 ten 1 tenth | b. | 3 – 22 tenths | c. | 37 tenths – 1 one 2 tenths |
|----|---------------------------|----|----------------------|----|----------------------------|
| | | | | | |
| | | | | | |
| | | | | | |
| d. | 8 ones 9 hundredths – 3.4 | e. | 5.622 – 3 hundredths | f. | 2 ones 4 tenths – 0.59 |
| | | | | | |
| | | | | | |
| | | | | | |

4. Mrs. Fan wrote 5 tenths minus 3 hundredths on the board. Michael said the answer is 2 tenths because 5 minus 3 is 2. Is he correct? Explain.

5. A pen costs \$2.09. It costs \$0.45 less than a marker. Ken paid for one pen and one marker with a five dollar bill. Use a tape diagram with calculations to determine his change.



Subtract decimals using place value strategies and relate those strategies to a written method. 5/7/13



| Name | Date | |
|------|------|--|
| | | |

- 1. Solve by drawing disks on a place value chart. Write an equation and express the product in standard form.
 - a. 3 copies of 2 tenths b. 5 groups of 2 hundredths
 - c. 3 times 6 tenths d. 6 times 4 hundredths

- e. 5 times as much as 7 tenths f. 4 thousandths times 3
- 2. Draw a model similar to the one pictured below for Parts (b), (c), and (d). Find the sum of the partial products to evaluate each expression.

| a. 7×3.12 | | 3 ones | + 1 tenth | + 2 hundredths |
|-----------|---|------------|-------------|------------------|
| | 7 | 7 x 3 ones | 7 x 1 tenth | 7 x 2 hundredths |
| | | | + | + 0.14 = |

b. 6 x 4.25





c. 3 copies of 4.65

d. 4 times as much as 20.075

3. Miles incorrectly gave the product of 7 x 2.6 as 14.42. Use a place value chart or an area model to help Miles understand his mistake.

4. Mrs. Zamir wants to buy 8 protractors and some erasers for her classroom. She has \$30. If protractors cost \$2.65 each, how much will Mrs. Zamir have left to buy erasers?



Lesson 11:

Multiply a decimal fraction by single-digit whole numbers, relate to a written method through application of the area model and place value understanding, and explain the reasoning used. 5/8/13



1.E.11

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| Name | | | | Date | | | |
|------|---|---------|--------|--|--------|--------|--|
| 1. | Choose the reasonable product for each expression. I words, pictures and numbers. | | | Explain your reasoning in the spaces below | | | |
| | a. 2. | 5 x 4 | 0.1 | 1 | 10 | 100 | |
| | | | | | | | |
| | b. 3. | 14 x 7 | 2198 | 219.8 | 21.98 | 2.198 | |
| | | | | | | | |
| | c. 8 | x 6.022 | 4.8176 | 48.176 | 481.76 | 4817.6 | |
| | | | | | | | |
| | d. 9 | x 5.48 | 493.2 | 49.32 | 4.932 | .4932 | |
| | | | | | | | |



Multiply a decimal fraction by single-digit whole numbers, including using estimation to confirm the placement of the decimal point. 5/7/13

engage^{ny}

1.E.23

2. Pedro is building a spice rack with 4 shelves that are each 0.55 meter long. At the hardware store, Pedro finds that he can only buy the shelving in whole meter lengths. Exactly how many meters of shelving does Pedro need? Since he can only buy whole number lengths, how many meters of shelving should he buy? Justify your thinking.

3. Marcel rides his bicycle to school and back on Tuesdays and Thursdays. He lives 3.62 kilometers away from school. Marcel's gym teacher wants to know about how many kilometers he bikes in a week. Marcel's math teacher wants to know exactly how many kilometers he bikes in a week. What should Marcel tell each teacher? Show your work.

4. The poetry club had its first bake sale, and they made \$79.35. The club members are planning to have 4 more bake sales. Leslie said, "If we make the same amount at each bake sale, we'll earn \$3,967.50." Peggy said, "No way, Leslie! We'll earn \$396.75 after five bake sales." Use estimation to help Peggy explain why Leslie's reasoning is inaccurate. Show your reasoning using words, numbers and pictures.



Multiply a decimal fraction by single-digit whole numbers, including using estimation to confirm the placement of the decimal point. 5/7/13



1.E.24

| equation. |
|--------------|
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| andard form. |
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Divide decimals by single-digit whole numbers involving easily identifiable multiples using place value understanding and relate to a written method. 5/7/13

| d. | 4.26 ÷ 6 = | tenths ÷ 6 + | hundredths ÷ 6 |
|----|-------------|--------------|----------------|
| | = | | |
| | = | | |
| | | | |
| | | | |
| e. | 4.236 ÷ 6 = | | |
| | = | | |
| | | | |
| | = | | |

- 3. Find the quotients. Then use words, numbers, or pictures to describe any relationships you notice between each pair of problems and quotients.
 - a. 32 ÷ 8 = _____ 3.2 ÷ 8 = _____
 - b. 81÷9 = _____ 0.081÷9 = _____

- 4. Are the quotients below reasonable? Explain your answer.
 - a. 5.6 ÷ 7 = 8
 - b. 56 ÷ 7 = 0.8
 - c. .56 ÷ 7 = 0.08

engage^{ny}



5. 12.48 milliliters of medicine were separated into doses of 4 ml each. How many doses were made?

6. The price of most milk in 2013 is around \$3.28 a gallon. This is eight times as much as you would have probably paid for a gallon of milk in the 1950's. What was the cost for a gallon of milk during the 1950's? Use a tape diagram and show your calculations.



Lesson 13: Divid ident relate

Divide decimals by single-digit whole numbers involving easily identifiable multiples using place value understanding and relate to a written method.

engage^{ny} _____

Name _____

Date _____

- 1. Draw number disks on the place value chart to solve. Show your steps using the standard algorithm.
 - a. 4.236 ÷ 3 = _____

| Ones | Tenths | Hundredths | Thousandths |
|------|--------|------------|-------------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

3 4.236

b. 1.324 ÷ 2 = _____

| Ones | Tenths | Hundredths | Thousandths |
|------|--------|------------|-------------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |



Divide decimals with a remainder using place value understanding and relate to a written method. 5/8/13



2. Solve using the standard algorithm.

| a. 0.78÷3= | b. 7.28 ÷ 4 = | c. 17.45 ÷ 5 = |
|------------|---------------|----------------|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Grayson wrote the following in her math journal: 1.47 ÷ 7 = 2.1
 Use words, numbers and pictures to explain why Grayson's thinking is incorrect.

4. Mrs. Nguyen used 1.48 meters of netting to make 4 identical mini hockey goals. How much netting did she use per goal?

5. Esperanza usually buys avocados for \$0.94 apiece. During a sale, she gets 5 avocados for \$4.10. How much money did she save per avocado? Use a tape diagram and show your calculations.



Divide decimals with a remainder using place value understanding and relate to a written method. 5/8/13





Name _____

Date _____

- 1. Draw number disks on the place value chart to solve, and show your steps using long division.
 - a. 0.5 ÷ 2 = _____

| Ones | • | Tenths | Hundredths | Thousand ths |
|------|---|--------|------------|--------------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

2 0.5

b. 5.7 ÷ 4 = _____

| Ones | • | Tenths | Hundredths | Thousand ths |
|------|---|--------|------------|--------------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
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Lesson 15:

Divide decimals using place value understanding, including remainders in the smallest unit. 5/8/13

2. Solve using the standard algorithm.

| a. 0.9÷2= | b. 9.1÷5= | c. 9÷6= |
|---------------|--------------|-------------|
| d. 0.98 ÷ 4 = | e. 9.3 ÷ 6 = | f. 91 ÷ 4 = |
| | | |

3. Six bakers shared 7.5 kg of flour equally. How much flour did they each receive?

4. Mrs. Henderson makes punch by mixing 10.9 liters of apple juice, 600 milliliters of orange juice, and 8 liters of ginger ale. She pours the mixture equally into 6 large punch bowls. How much punch is in each bowl? Express your answer in liters.



Divide decimals using place value understanding, including remainders in the smallest unit. 5/8/13



| Name | Date |
|------|------|
| | |

Solve.

- 1. Mr. Frye distributed \$126 equally among his 4 children for their weekly allowance.
 - a. How much money did each child receive?

b. John, the oldest child, paid his siblings to do his chores. If John pays his allowance equally to his brother and two sisters, how much money will each of his siblings have received in all?

2. Ava is 23 cm taller than Olivia, and Olivia is half the height of Lucas. If Lucas is 1.78 m tall, how tall are Ava and Olivia? Express their heights in centimeters.





3. Mr. Hower can buy a computer with a down payment of \$510 and 8 monthly payments of \$35.75. If he pays cash for the computer, the cost is \$699.99. How much money will he save if he pays cash for the computer instead of paying for it in monthly payments?

4. Brandon mixed 6.83 lbs. of cashews with 3.57 lbs. of pistachios. After filling up 6 bags that were the same size with the mixture, he had 0.35 lbs. of nuts left. What was the weight of each bag? Use a tape diagram and show your calculations.





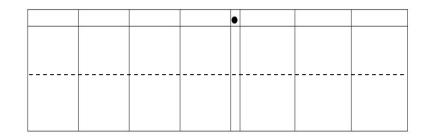
- 5. The bakery bought 4 bags of flour containing 3.5 kg each. 475 g of flour are needed to make a batch of muffins and 0.65 kg is needed to make a loaf of bread.
 - a. If 4 batches of muffins and 5 loaves of bread are baked, how much flour will be left? Give your answer in kilograms.

b. The remaining flour is stored in bins that hold 3 kg each. How many bins will be needed to store the flour? Explain your answer.



Date _____

- 1. Write the first factor above the dashed line on the place value chart and the product or quotient under the dashed line, using arrows to show how the value of the digits changed. Then write your answer in the blank.
 - a. 6.671 × 100 = _____



b. 684 ÷ 1000 = _____

| | | • | | |
|------|------|---|------|--|
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| | | | | |
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| | | | | |
| | | | | |





| Nai | me | | Date |
|-----|--------------------------|-------|--------------|
| 1. | Solve. | | |
| | a. 32.1 x 10 = Solve. | b. 36 | 532.1 ÷ 10 = |
| | a. 455 x 1000 = | b. 45 | 55 ÷ 1000 = |





| • • | | | |
|-----|---|---|---|
| N | а | m | ρ |

Date _____

1. Write the following in exponential form and as a multiplication sentence using only 10 as a factor (e.g., $100 = 10^2 = 10 \times 10$).

a. 1,000 = _____ = ____

- b. 100 × 100 = _____ = ____
- 2. Write the following in standard form (e.g., $4 \times 10^2 = 400$).

| a. | 3 x 10 ² = | с. | 800 ÷ 10 ² = |
|----|-----------------------|----|-------------------------|
|----|-----------------------|----|-------------------------|

b. $2.16 \times 10^4 =$

d. $754.2 \div 10^3 =$ _____



Use Exponents to Name Place Value Units and Explain Patterns in the Placement of the Decimal Point 5/7/13



| Na | Name | | Date | | |
|----|------|--------------------------|---------|---|----|
| 1. | Cor | ivert: | | | |
| | a. | 2 meters to centimeters | 2 m × | = | cm |
| | b. | 40 milliliters to liters | 40 ml ÷ | = | 1 |

- 2. Read each aloud as you write the equivalent measures.
 - a. 4.371= _____1 _____ml
 - b. 81.62 kg = _____ kg _____ g



Use exponents to denote powers of 10 with application to metric conversions. 5/7/13



Date _____

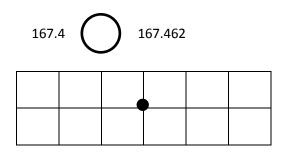
- 1. Express nine thousandths as a decimal.
- 2. Express twenty-nine thousandths as a fraction.
- 3. Express 24.357 in words.
 - a. Write the expanded form using fractions or decimals.
 - b. Express in unit form.





Date _____

1. Show the numbers on the place value chart using digits. Use >, <, or = to compare. Explain your thinking to the right.



2. Use >, <, and = to compare the numbers.



3. Arrange in descending order.

76.342 76.332 76.232 76.343





Date _____

Use the table to round the number to the given places. Label the number lines and circle the rounded value.

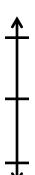
| (| 0 | 8 ones | 5 tenths | 4 hundredths | 6 thousandths |
|---|---|--------|-----------|----------------|---------------|
| | | | 85 tenths | 4 hundredths | 6 thousandths |
| | | | | 854 hundredths | 6 thousandths |
| | | | | | 8546 |

8.546

a. hundredths

b. tens







Round a given decimal to any place using place value understanding and the vertical number line. 5/7/13



Date _____

- 1. Round the quantity to the given place value. Draw number lines to explain your thinking. Circle the rounded value on the number line.
 - a. 13.989 to nearest tenth

b. 382.993 to nearest hundredth



Round a given decimal to any place using place value understanding and the vertical number line. 5/7/13



| Nar | ne | Date | | |
|-----|---|--------|-------------|--|
| 1. | Solve. a. 4 hundredths + 8 hundredths = hundredths = | tenths | _hundredths | |

b. 64 hundredths + 8 hundredths = _____ hundredths = _____ tenths _____ hundredths

2. Solve using the standard algorithm.

| a. 2.40 + 1.8 = | b. 36.25 + 8.67 = |
|-----------------|-------------------|
| | |
| | |
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| | |
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| | |
| | |
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| | |



Add decimals using place value strategies and relate those strategies to a written method. 5/7/13



| Nar | me | | | Date | |
|-----|-------------|----------|----------|----------|--|
| 1. | Subtract. | | | | |
| | 1.7 – 0.8 = | tenths – | tenths = | tenths = | |

- 2. Subtract vertically, showing all work.
 - a. 84.637 28.56 = _____

b. 7 – 0.35 = _____



Subtract decimals using place value strategies and relate those strategies to a written method. 5/7/13



Date _____

1. Solve by drawing disks on a place value chart. Write an equation and express the product in standard form.

4 copies of 3 tenths

2. Complete the area model, and then find the product.

3 × 9.63

| 3 x ones | 3 x tenths | 4 x hundredths |
|--------------|------------|----------------|





| Name | | | Date | | |
|--|-------|-------|-------|------|--|
| 1. Use estimation to choose the correct value for each expression. | | | | | |
| a. 5.1 x 2 | 0.102 | 1.02 | 10.2 | 102 | |
| b. 4 x 8.93 | 3.572 | 35.72 | 357.2 | 3572 | |

2. Estimate the answer for 7.13 x 6. Explain your reasoning using words, pictures or numbers.



Multiply a decimal fraction by single-digit whole numbers, including using estimation to confirm the placement of the decimal point. 5/7/13



1.E.25

| Na | me | | | Date | |
|----|----|--------------------|----------------------------|---|--|
| 1. | Со | mplete the sentenc | es with the correct number | of units and complete the equation. | |
| | a. | 2 groups of | _tenths is 1.8 | 1.8 ÷ 2 = | |
| | b. | 4 groups of | _hundredths is 0.32 | 0.32 ÷ 4 = | |
| | c. | 7 groups of | _thousandths is 0.021 | 0.021 ÷ 7 = | |
| 2. | Со | mplete the number | sentence. Express the quo | tient in units and then in standard form. | |
| | a. | 4.5 ÷ 5 = | tenths ÷5 = | tenths = | |
| | b. | 6.12 ÷ 6 = | ones ÷ 6 + | hundredths ÷6 | |
| | | = | ones + | _ hundredths | |
| | | = | | | |



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Date _____

- 1. Draw number disks on the place value chart to solve. Show your steps using long division.
 - a. 5.372 ÷ 2 = _____

| Ones | Tenths | Hundredths | Thousandths |
|------|--------|------------|-------------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

2 5.372

engage^{ny}

1.F.25

- 2. Solve using the standard algorithm.
 - a. 0.178 ÷ 4 = _____



5/0/1

Date _____

1. Draw number disks on the place value chart to solve, and show your steps using long division.

0.9 ÷ 4 = _____

| Ones | • | Tenths | Hundredths | Thousandths |
|------|---|--------|------------|-------------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

4 0.9

2. Solve using the standard algorithm.

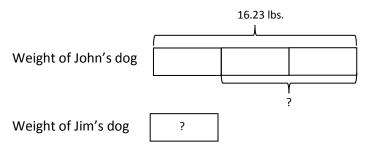
9.8 ÷ 5 =

Divide decimals using place value understanding, including remainders in the smallest unit. 5/8/13



Date _____

Write a word problem with two questions that matches the tape diagram below, then solve.

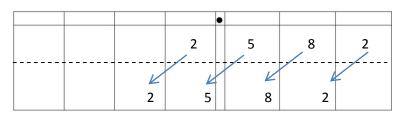




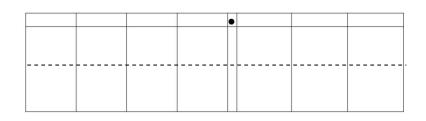


Date _____

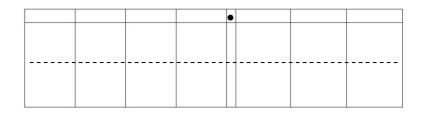
- 1. Record the digits of the first factor on the top row of the place value chart. Draw arrows to show how the value of each digit changes when you multiply. Record the product on the second row of the place value chart. The first one has been done for you.
 - a. 4.582 x 10 = <u>45.82</u>



b. 7.281 x 100 = _____



c. 9.254 x 1000 = _____

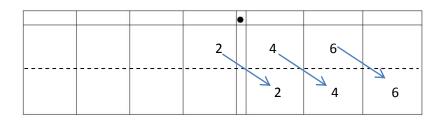


d. Explain how and why the value of the 2 changed in (a), (b), and (c).

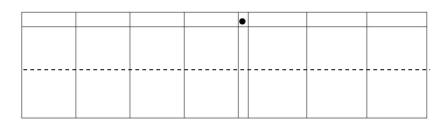




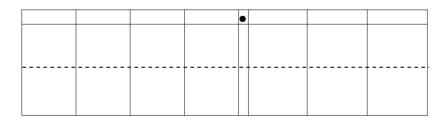
- 2. Record the digits of the dividend on the top row of the place value chart. Draw arrows to show how the value of each digit changes when you divide. Record the quotient on the second row of the place value chart. The first one has been done for you.
 - a. 2.46 ÷ 10 = <u>0.246</u>



b. 678 ÷ 100 =____



c. 67 ÷ 1000=___



d. Explain how and why the value of the 6 changed in the quotients in (a), (b), and (c).





3. Researchers counted 8,912 monarch butterflies on one branch of a tree at a site in Mexico. They estimated that the total number of butterflies at the site was 1000 times as large. About how many butterflies were at the site in all? Explain your thinking and include a statement of the solution.

4. A student used his place value chart to show a number. After the teacher instructed him to divide his number by 100, the chart showed 28.003. Draw a picture of what the place value chart looked like at first.

| | | • | | |
|--|--|---|--|--|
| | | | | |

a. Explain how you decided what to draw on your place value chart. Be sure to include your reasoning about how the value of the digits was affected by the division.

5. On a map, the perimeter of a park is 0.251 meters. The actual perimeter of the park is 1000 times as large. What is the actual perimeter of the park? Explain how you know using a place value chart.





| Na | me | | | Date |
|----|-----|---|--------|-------------------------------|
| 1. | Sol | ve. | | |
| | a. | 36,000 x 10 = | e. | 0.24 x 100 = |
| | b. | 36,000 ÷ 10 = | f. | 24 ÷ 1000 = |
| | c. | 4.3 x 10 = | g. | 4.54 x 1000 = |
| | d. | 4.3 ÷ 10 = | h. | 3045.4 ÷ 100 = |
| 2. | Fin | d the products. | | |
| | a. | 14,560 x 10 = | | |
| | b. | 14,560 x 100 = | | |
| | C. | 14,560 x 1000 = | | |
| | d. | Explain how you decided on the number of zeros in t | he pr: | oducts for (a), (b), and (c). |
| 3. | Fin | d the quotients. | | |
| | a. | 1.65 ÷ 10 = | | |
| | b. | 1.65 ÷ 100 = | | |

c. Explain how you decided where to place the decimal in the quotients in (a), (b), and (c).





4. Ted says that 3 tenths multiplied by 100 equal 300 thousandths. Is he correct? Use a place value chart to explain your answer.

5. Alaska has a land area of about 1,700,000 km². Florida has a land area 1/10 the size of Alaska. What is the land area of Florida? Explain how you found your answer.





1.A.42

| Name | Date |
|---|---|
| 1. Write the following in exponential form (e | e.g., $100 = 10^2$). |
| a. 1000 = | d. 100 x 10 = |
| b. 10 × 10 = | e. 1,000,000 = |
| c. 100,000 = | f. 10,000 × 10 = |
| 2. Write the following in standard form (e.g. | , 4 x 10 ² = 400). |
| a. $4 \times 10^3 =$ | e. $6.072 \times 10^3 =$ |
| b. $64 \times 10^4 =$ | f. $60.72 \times 10^4 =$ |
| c. $5300 \div 10^2 =$ | g. 948 \div 10 ³ = |
| d. 5,300,000 ÷ 10 ³ = | h. 9.4 $\div 10^2 =$ |
| 3. Complete the patterns. | |
| a. 0.02 0.2 20 | |
| b. 3,400,000 34,000 | 3.4 |
| c 8,570 | _ 85.7 8.57 |
| d. 444 4440 44,400 | |
| e 9.5 950 95,000 | |
| | |
| | ents to Name Place Value Units and Explain Patterns in ent of the Decimal Point engage |

 After a lesson on exponents, Tia went home and said to her mom, "I learned that 10⁴ is the same as 40,000." She has made a mistake in her thinking. Use words, numbers or a place value chart to help Tia correct her mistake.

- 5. Solve $247 \div 10^2$ and 247×10^2 .
 - a. What is different about the two answers? Use words, numbers or pictures to explain how the decimal point shifts.

b. Based on the answers from the pair of expressions above, solve $247 \div 10^3$ and 247×10^3 .

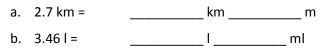


Use Exponents to Name Place Value Units and Explain Patterns in the Placement of the Decimal Point 5/7/13



| Na | me | | Dat | te |
|----|----|-----------------------------|-------------|----|
| 1. | Со | nvert: | | |
| | a. | 5 meters to centimeters | 5 m × = | cm |
| | b. | 60 centimeters to meters | 60 cm ÷ = | m |
| | | | | |
| | с. | 2300 milliliters to liters. | 2.3 l ÷ = | ml |
| | d. | 0.462 liters to milliliters | 0.462 l × = | ml |
| | ρ | 80.4 kilometers to meters | = | m |
| | f. | 0.725 kilometers to meters | = | m |
| | | | | |
| | g. | 456 grams to kilograms | = _ | kg |
| | h. | 0.3 kilograms to grams | = _ | g |

2. Read each aloud as you write the equivalent measures.



c. 5.005 kg = _____ kg _____ g

- d. 8 ml = _____ l
- e. 4079 g = _____ kg



Use exponents to denote powers of 10 with application to metric conversions. 5/7/13



- 3. A dining room table measures 1.78 m long. Express this measurement in millimeters.
 - a. Explain your thinking using a place value chart.

b. Explain your thinking using an equation that includes an exponent.

4. Eric and YiTing commute to school every day. Eric walks 0.81 km and YiTing walks 0.65 km. How far did each of them walk in meters? Explain your answer using an equation that includes an exponent.

5. There were 9 children at a birthday party. Each child drank one 200 ml juice box. How many liters of juice did they drink altogether? Explain your answer using an equation that includes an exponent.



Use exponents to denote powers of 10 with application to metric conversions. 5/7/13



Date _____

1. Express as decimal numerals. The first one is done for you.

| a. | Five thousandths | 0.005 |
|----|--|-------|
| b. | Thirty-five thousandths | |
| с. | Nine and two hundred thirty-five thousandths | |
| d. | Eight hundred and five thousandths | |
| e. | 8 1000 | |
| f. | 28 1000 | |
| g. | $7\frac{528}{1000}$ | |
| h. | $300\frac{502}{1000}$ | |

2. Express in words.

- a. 0.008
- b. 15.062
- c. 607.409
- 3. Write the number on a place value chart then write it in expanded form using fractions or decimals to express the decimal place value units. The first one is done for you.
 - a. 27.346

| tens | ones | tenths | hundredths | thousandths |
|------|------|--------|------------|-------------|
| 2 | 7 | 3 | 4 | 6 |

 $27.346 = 2 \times 10 + 7 \times 1 + 3 \times \left(\frac{1}{10}\right) + 4 \times \left(\frac{1}{100}\right) + 6 \times \left(\frac{1}{1000}\right)$

OR

 $27.346 = 2 \times 10 + 7 \times 1 + 3 \times 0.1 + 4 \times 0.01 + 6 \times 0.001$



Name decimal fractions in expanded, unit, and word forms by applying place value reasoning. 5/7/13



b. 0.362

c. 49.564

4. Write a decimal for each of the following. Use a place value chart to help if necessary.

a.
$$3 \times 10 + 5 \times 1 + 2 \times \left(\frac{1}{10}\right) + 7 \times \left(\frac{1}{100}\right) + 6 \times \left(\frac{1}{1000}\right)$$

b. $9 \times 100 + 2 \times 10 + 3 \times 0.1 + 7 \times 0.001$

c.
$$5 \times 1000 + 4 \times 100 + 8 \times 1 + 6 \times \left(\frac{1}{100}\right) + 5 \times \left(\frac{1}{1000}\right)$$

- 5. At the beginning of a lesson, a piece of chalk is 2.967 of an inch. At the end of lesson, it's 2.308 of an inch. Write the two amounts in expanded form using fractions.
 - a. At the beginning of the lesson:
 - b. At the end of the lesson:
- 6. Mrs. Herman asked the class to write an expanded form for 412.638. Nancy wrote the expanded form using fractions and Charles wrote the expanded form using decimals. Write their responses.





Date _____

1. Use >, <, or = to compare the following.

| a. | 16.45 | 0 | 16.454 |
|----|--|------------|---|
| b. | 0.83 | 0 | 83 100 |
| с. | 205 1000 | \bigcirc | 0.205 |
| d. | 95.045 | \bigcirc | 95.545 |
| e. | 419.10 | \bigcirc | 419.099 |
| f. | Five ones and eight tenths | 0 | Fifty-eight tenths |
| g. | Thirty-six and nine thousandths | 0 | Four tens |
| h. | One hundred four and twelve hundredths | 0 | One hundred four and two thousandths |
| i. | One hundred fifty-eight thousandths | 0 | 0.58 |
| j. | 703.005 | 0 | Seven hundred three and five hundredths |

2. Arrange the numbers in increasing order.

a. 8.08 8.081 8.09 8.008

b. 14.204 14.200 14.240 14.210



Compare decimal fractions to the thousandths using like units and express comparisons with >, <, and =. 5/7/13



- 3. Arrange the numbers in decreasing order.
 - a. 8.508 8.58 7.5 7.058

b. 439.216 439.126 439.612 439.261

4. James measured his hand. It was 0.17 meters. Jennifer measured her hand. It was 0.165 meters. Whose hand is bigger? How do you know?

 In a paper airplane contest, Marcel's plane travels 3.345 meters. Salvador's plane travels 3.35 meters. Jennifer's plane travels 3.3 meters. Based on the measurements, whose plane traveled the farthest distance? Whose plane traveled the shortest distance? Explain your reasoning using a place value chart.

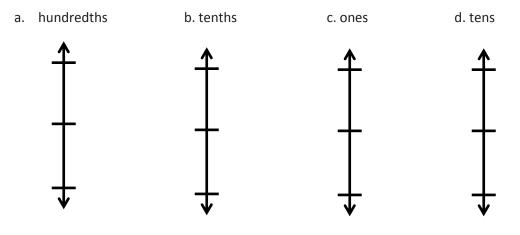




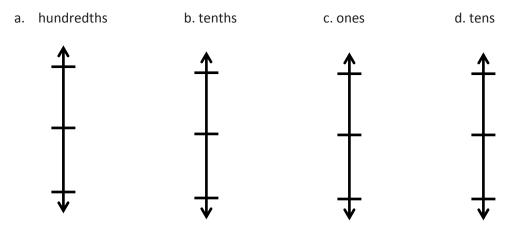
Date _____

Round to the given place value. Label the number lines to show your work. Circle the rounded number. Use a separate sheet to show your decompositions for each one.

1. 4.3



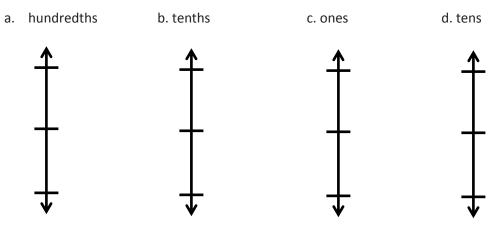
2. 225.286





Round a given decimal to any place using place value understanding and the vertical number line. 5/7/13

3. 8.984



- 4. On a major League Baseball diamond, the distance from the pitcher's mound to home plate is 18.386 meters.
 - a. Round this number to the nearest hundredth of a meter to estimate the distance. Use a number line to show your work.

b. About how many centimeters is it from the pitcher's mound to home plate?

5. Jules reads that one pint is equivalent to 0.473 liters. He asks his teacher how many liters there are in a pint. His teacher responds that there are about 0.47 liters in a pint. He asks his parents, and they say there are about 0.5 liters in a pint. Jules says they are both correct. How can that be true? Explain your answer.

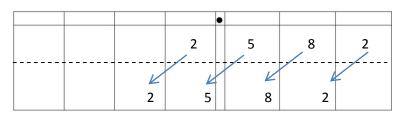


Round a given decimal to any place using place value understanding and the vertical number line. 5/7/13

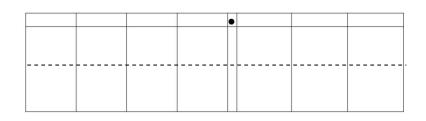


Date _____

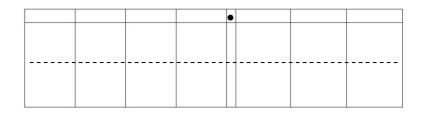
- 1. Record the digits of the first factor on the top row of the place value chart. Draw arrows to show how the value of each digit changes when you multiply. Record the product on the second row of the place value chart. The first one has been done for you.
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b. 7.281 x 100 = _____



c. 9.254 x 1000 = _____

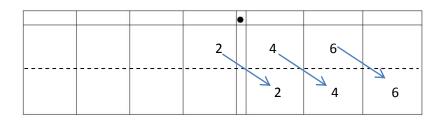


d. Explain how and why the value of the 2 changed in (a), (b), and (c).

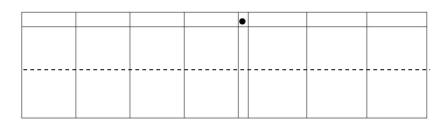




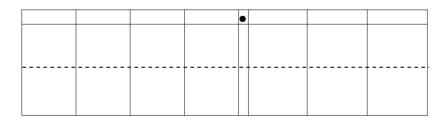
- 2. Record the digits of the dividend on the top row of the place value chart. Draw arrows to show how the value of each digit changes when you divide. Record the quotient on the second row of the place value chart. The first one has been done for you.
 - a. 2.46 ÷ 10 = <u>0.246</u>



b. 678 ÷ 100 =____



c. 67 ÷ 1000=___



d. Explain how and why the value of the 6 changed in the quotients in (a), (b), and (c).





3. Researchers counted 8,912 monarch butterflies on one branch of a tree at a site in Mexico. They estimated that the total number of butterflies at the site was 1000 times as large. About how many butterflies were at the site in all? Explain your thinking and include a statement of the solution.

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| | | • | | |
|--|--|---|--|--|
| | | | | |

a. Explain how you decided what to draw on your place value chart. Be sure to include your reasoning about how the value of the digits was affected by the division.

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| Na | Name | | | Date |
|----|------|---|--------|-------------------------------|
| 1. | Sol | ve. | | |
| | a. | 36,000 x 10 = | e. | 0.24 x 100 = |
| | b. | 36,000 ÷ 10 = | f. | 24 ÷ 1000 = |
| | c. | 4.3 x 10 = | g. | 4.54 x 1000 = |
| | d. | 4.3 ÷ 10 = | h. | 3045.4 ÷ 100 = |
| 2. | Fin | d the products. | | |
| | a. | 14,560 x 10 = | | |
| | b. | 14,560 x 100 = | | |
| | C. | 14,560 x 1000 = | | |
| | d. | Explain how you decided on the number of zeros in t | he pr: | oducts for (a), (b), and (c). |
| 3. | Fin | d the quotients. | | |
| | a. | 1.65 ÷ 10 = | | |
| | b. | 1.65 ÷ 100 = | | |

c. Explain how you decided where to place the decimal in the quotients in (a), (b), and (c).



Reason abstractly using place value understanding to relate adjacent base ten units from millions to thousandths. 5/7/13



4. Ted says that 3 tenths multiplied by 100 equal 300 thousandths. Is he correct? Use a place value chart to explain your answer.

5. Alaska has a land area of about 1,700,000 km². Florida has a land area 1/10 the size of Alaska. What is the land area of Florida? Explain how you found your answer.



Reason abstractly using place value understanding to relate adjacent base ten units from millions to thousandths. 5/7/13



1.A.42

| Name | Date |
|---|---|
| 1. Write the following in exponential form (e | e.g., $100 = 10^2$). |
| a. 1000 = | d. 100 x 10 = |
| b. 10 × 10 = | e. 1,000,000 = |
| c. 100,000 = | f. 10,000 × 10 = |
| 2. Write the following in standard form (e.g. | ., $4 \times 10^2 = 400$). |
| a. $4 \times 10^3 =$ | e. $6.072 \times 10^3 =$ |
| b. $64 \times 10^4 =$ | f. $60.72 \times 10^4 =$ |
| c. $5300 \div 10^2 =$ | g. 948 \div 10 ³ = |
| d. 5,300,000 $\div 10^3 =$ | h. 9.4 $\div 10^2 =$ |
| 3. Complete the patterns. | |
| a. 0.02 0.2 20 | |
| b. 3,400,000 34,000 | 3.4 |
| c 8,570 | 85.7 8.57 |
| d. 444 4440 44,400 | |
| e 9.5 950 95,000 |) |
| | |
| | ents to Name Place Value Units and Explain Patterns in engage ^{ny} |

 After a lesson on exponents, Tia went home and said to her mom, "I learned that 10⁴ is the same as 40,000." She has made a mistake in her thinking. Use words, numbers or a place value chart to help Tia correct her mistake.

- 5. Solve $247 \div 10^2$ and 247×10^2 .
 - a. What is different about the two answers? Use words, numbers or pictures to explain how the decimal point shifts.

b. Based on the answers from the pair of expressions above, solve $247 \div 10^3$ and 247×10^3 .

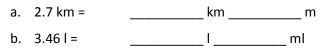


Use Exponents to Name Place Value Units and Explain Patterns in the Placement of the Decimal Point 5/7/13



| Name | | | Dat | Date | |
|------|----|-----------------------------|-------------|------|--|
| 1. | Со | nvert: | | | |
| | a. | 5 meters to centimeters | 5 m × = | cm | |
| | b. | 60 centimeters to meters | 60 cm ÷ = | m | |
| | | | | | |
| | с. | 2300 milliliters to liters. | 2.3 l ÷ = | ml | |
| | d. | 0.462 liters to milliliters | 0.462 l × = | ml | |
| | ρ | 80.4 kilometers to meters | = | m | |
| | f. | 0.725 kilometers to meters | = | m | |
| | | | | | |
| | g. | 456 grams to kilograms | = | kg | |
| | h. | 0.3 kilograms to grams | = _ | g | |

2. Read each aloud as you write the equivalent measures.



c. 5.005 kg = _____ kg _____ g

- d. 8 ml = _____ l
- e. 4079 g = _____ kg



Use exponents to denote powers of 10 with application to metric conversions. 5/7/13



- 3. A dining room table measures 1.78 m long. Express this measurement in millimeters.
 - a. Explain your thinking using a place value chart.

b. Explain your thinking using an equation that includes an exponent.

4. Eric and YiTing commute to school every day. Eric walks 0.81 km and YiTing walks 0.65 km. How far did each of them walk in meters? Explain your answer using an equation that includes an exponent.

5. There were 9 children at a birthday party. Each child drank one 200 ml juice box. How many liters of juice did they drink altogether? Explain your answer using an equation that includes an exponent.



Use exponents to denote powers of 10 with application to metric conversions. 5/7/13



Date _____

1. Express as decimal numerals. The first one is done for you.

| a. | Five thousandths | 0.005 |
|----|--|-------|
| b. | Thirty-five thousandths | |
| с. | Nine and two hundred thirty-five thousandths | |
| d. | Eight hundred and five thousandths | |
| e. | 8 1000 | |
| f. | 28 1000 | |
| g. | $7\frac{528}{1000}$ | |
| h. | $300\frac{502}{1000}$ | |

2. Express in words.

- a. 0.008
- b. 15.062
- c. 607.409
- 3. Write the number on a place value chart then write it in expanded form using fractions or decimals to express the decimal place value units. The first one is done for you.
 - a. 27.346

| tens | ones | tenths | hundredths | thousandths |
|------|------|--------|------------|-------------|
| 2 | 7 | 3 | 4 | 6 |

 $27.346 = 2 \times 10 + 7 \times 1 + 3 \times \left(\frac{1}{10}\right) + 4 \times \left(\frac{1}{100}\right) + 6 \times \left(\frac{1}{1000}\right)$

OR

 $27.346 = 2 \times 10 + 7 \times 1 + 3 \times 0.1 + 4 \times 0.01 + 6 \times 0.001$



Name decimal fractions in expanded, unit, and word forms by applying place value reasoning. 5/7/13



b. 0.362

c. 49.564

4. Write a decimal for each of the following. Use a place value chart to help if necessary.

a.
$$3 \times 10 + 5 \times 1 + 2 \times \left(\frac{1}{10}\right) + 7 \times \left(\frac{1}{100}\right) + 6 \times \left(\frac{1}{1000}\right)$$

b. $9 \times 100 + 2 \times 10 + 3 \times 0.1 + 7 \times 0.001$

c.
$$5 \times 1000 + 4 \times 100 + 8 \times 1 + 6 \times \left(\frac{1}{100}\right) + 5 \times \left(\frac{1}{1000}\right)$$

- 5. At the beginning of a lesson, a piece of chalk is 2.967 of an inch. At the end of lesson, it's 2.308 of an inch. Write the two amounts in expanded form using fractions.
 - a. At the beginning of the lesson:
 - b. At the end of the lesson:
- 6. Mrs. Herman asked the class to write an expanded form for 412.638. Nancy wrote the expanded form using fractions and Charles wrote the expanded form using decimals. Write their responses.





Date _____

1. Use >, <, or = to compare the following.

| a. | 16.45 | 0 | 16.454 |
|----|--|------------|---|
| b. | 0.83 | \bigcirc | 83 100 |
| c. | 205 1000 | \bigcirc | 0.205 |
| d. | 95.045 | \bigcirc | 95.545 |
| e. | 419.10 | \bigcirc | 419.099 |
| f. | Five ones and eight tenths | 0 | Fifty-eight tenths |
| g. | Thirty-six and nine thousandths | 0 | Four tens |
| h. | One hundred four and twelve hundredths | 0 | One hundred four and two thousandths |
| i. | One hundred fifty-eight thousandths | \bigcirc | 0.58 |
| j. | 703.005 | 0 | Seven hundred three and five hundredths |

2. Arrange the numbers in increasing order.

a. 8.08 8.081 8.09 8.008

b. 14.204 14.200 14.240 14.210



Compare decimal fractions to the thousandths using like units and express comparisons with >, <, and =. 5/7/13



- 3. Arrange the numbers in decreasing order.
 - a. 8.508 8.58 7.5 7.058

b. 439.216 439.126 439.612 439.261

4. James measured his hand. It was 0.17 meters. Jennifer measured her hand. It was 0.165 meters. Whose hand is bigger? How do you know?

 In a paper airplane contest, Marcel's plane travels 3.345 meters. Salvador's plane travels 3.35 meters. Jennifer's plane travels 3.3 meters. Based on the measurements, whose plane traveled the farthest distance? Whose plane traveled the shortest distance? Explain your reasoning using a place value chart.

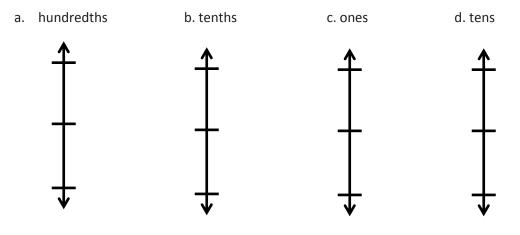




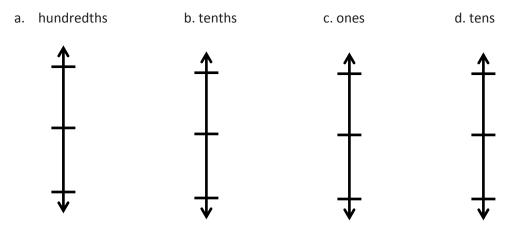
Date _____

Round to the given place value. Label the number lines to show your work. Circle the rounded number. Use a separate sheet to show your decompositions for each one.

1. 4.3



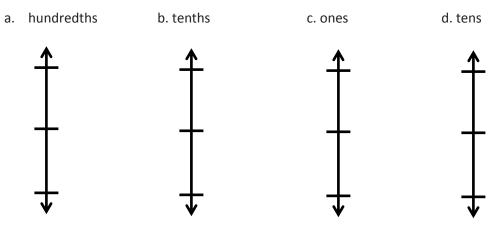
2. 225.286





Round a given decimal to any place using place value understanding and the vertical number line. 5/7/13

3. 8.984



- 4. On a major League Baseball diamond, the distance from the pitcher's mound to home plate is 18.386 meters.
 - a. Round this number to the nearest hundredth of a meter to estimate the distance. Use a number line to show your work.

b. About how many centimeters is it from the pitcher's mound to home plate?

5. Jules reads that one pint is equivalent to 0.473 liters. He asks his teacher how many liters there are in a pint. His teacher responds that there are about 0.47 liters in a pint. He asks his parents, and they say there are about 0.5 liters in a pint. Jules says they are both correct. How can that be true? Explain your answer.



Round a given decimal to any place using place value understanding and the vertical number line. 5/7/13



Date _____

- 1. Round the quantity to the given place value. Draw number lines to explain your thinking. Circle the rounded value on the number line.
 - a. 43.586 to nearest tenth, hundredth, and whole number

b. 243.875 to nearest tenth, hundredth, ten, and hundred

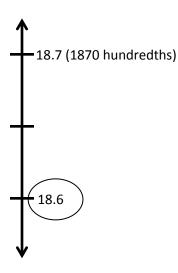
2. A trip from New York City to Seattle is 2,852.1 miles. A family wants to make the drive in 10 days, driving the same number of miles each day. About how many miles will they drive each day? Round you answer to the nearest tenth of a mile.



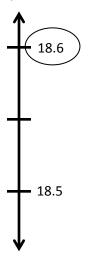
Round a given decimal to any place using place value understanding and the vertical number line. 5/7/13



- 3. A decimal number has two digits to the right of its decimal point. If we round it to the nearest tenth, the result is 18.6.
 - a. What is the maximum possible value of this decimal? Use words and the number line to explain your reasoning.



b. What is the minimum possible value of this decimal? Use words, numbers and pictures to explain your reasoning.





Round a given decimal to any place using place value understanding and the vertical number line. 5/7/13



| Name | | | | Date | |
|------|-----|-------------------------------------|---------------|------------|--------------|
| 1. | Sol | ve. | | | |
| | a. | 3 tenths + 4 tenths = | tenths | | |
| | b. | 12 tenths + 9 tenths = | _tenths = | one(s) | tenth(s) |
| | c. | 3 hundredths + 4 hundredths = | hundredths | | |
| | d. | 27 hundredths + 7 hundredths = | hundredths = | tenths | _hundredths |
| | e. | 4 thousandth + 3 thousandths = | thousandth | IS | |
| | f. | 39 thousandths + 5 thousandths = _ | thousandths = | hundredths | _thousandths |
| | g. | 5 tenths + 7 thousandths = | thousand ths | | |
| | h. | 4 ones 4 tenths + 4 tenths = | tenths | | |
| | i. | 8 thousandths + 6 ones 8 thousandth | hs = the | ousandths | |

2. Solve using the standard algorithm.

| a. 0.4 + 0.7 = | b. 2.04 + 0.07 = |
|----------------|-------------------|
| C. 6.4 + 3.7 = | d. 56.04 + 3.07 = |



Add decimals using place value strategies and relate those strategies to a written method. 5/7/13



| e. 72.564 + 5.137 = | f. 75.604 + 22.296 = |
|---------------------|----------------------|
| | |
| | |
| | |
| | |
| | |
| | |

- 3. Walkway Over the Hudson, a bridge that crosses the Hudson River in Poughkeepsie, is 2.063 kilometers. Anping Bridge, which was built in China 850 years ago, is 2.07 kilometers long.
 - a. Which bridge is longer? How much longer? Show your thinking.

b. Leah likes to walk her dog on the Walkway Over the Hudson. If she walks across and back, how far do she and her dog walk?

4. For his parents' anniversary, Danny spends \$5.87 on a photo. He also buys 3 balloons for \$2.49 each and a box of strawberries for \$4.50. How much money does he spend all together?



Add decimals using place value strategies and relate those strategies to a written method. 5/7/13



| Na | me | Date |
|----|-----|--|
| 1. | Sub | ptract. You may use a place value chart. |
| | a. | 9 tenths – 3 tenths = tenth |
| | b. | 9 ones 2 thousandths – 3 ones = ones thousandths |
| | C. | 4 hundreds 6 hundredths – 3 hundredths =hundredshundredths |
| | d. | 56 thousandths – 23 thousandths =thousandths |
| | | = hundredths thousandths |

2. Solve using the standard algorithm.

| a. 1.8 – 0.9 = | b. 41.84 – 0.9 = | c. 341.84 – 21.92 = |
|-------------------|--------------------|---------------------|
| d. 5.182 – 0.09 = | e. 50.416 – 4.25 = | f. 741. – 3.91 = |



Subtract decimals using place value strategies and relate those strategies to a written method. 5/7/13

1.D.24

3. Solve.

| a. 30 tens – 3 tens 3 tenths | b. 5 – 16 tenths | c. 24 tenths – 1 one 3 tenths |
|------------------------------|-------------------------|-------------------------------|
| d. 6 ones 7 hundredths – 2.3 | e. 8.246 – 5 hundredths | f. 5 ones 3 tenths – 0.53 |

4. Mr. House wrote 8 tenths minus 5 hundredths on the board. Maggie said the answer is 3 hundredths because 8 minus 5 is 3. Is she correct? Explain.

5. A clipboard costs \$2.23. It costs \$0.58 more than a notebook. Lisa buys two clipboards and one notebook, and paid with a ten dollar bill. Use a tape diagram with calculations to show her change.



Subtract decimals using place value strategies and relate those strategies to a written method. 5/7/13



| Name | Date | |
|------|------|--|
| | | |

- 1. Solve by drawing disks on a place value chart. Write an equation and express the product in standard form.
 - a. 2 copies of 4 tenths b. 4 groups of 5 hundredths

b. 4 times 7 tenths d. 3 times 5 hundredths

- c. 9 times as much as 7 tenths
- f. 6 thousandths times 8

2. Draw a model similar to the one pictured below. Find the sum of the partial products to evaluate each expression.

| a. 4×6.79 | 6 ones + 7 tenths + 9 hundredths | | |
|-----------|----------------------------------|--------------|------------------|
| 4 | 4 x 6 ones | 4 x 7 tenths | 4 x 9 hundredths |
| | | | |

_____ + _____ + _____ = _____



Multiply a decimal fraction by single-digit whole numbers, relate to a written method through application of the area model and place value understanding, and explain the reasoning used. 5/8/13



1.E.13

- b. 6 x 7.49 hundredths
- c. 9 copies of 3.65

d. 3 times 20.175

3. Leanne multiplied 8 x 4.3 and got 32.24. Is Leanne correct? Use an area model to explain your answer.

4. Anna buys groceries for her family. Hamburger meat is \$3.38 per pound, sweet potatoes are \$0.79 each, and hamburger rolls are \$2.30 a bag. If Anna buys 3 pounds of meat, 5 sweet potatoes, and one bag of hamburger rolls, what will she pay in all for the groceries?



Multiply a decimal fraction by single-digit whole numbers, relate to a written method through application of the area model and place value understanding, and explain the reasoning used. 5/8/13





| ame | | | Date | | |
|-----|--|--------------------------------|--------------|-------------------|-------------------|
| | se the reasonable prod s, pictures and number | uct for each expression. s. | Explain your | thinking in the s | paces below using |
| а. | 2.1 x 3 | 0.63 | 6.3 | 63 | 630 |
| | | | | | |
| b. | 4.27 x 6 | 2562 | 256.2 | 25.62 | 2.562 |
| | | | | | |
| С. | 7 x 6.053 | 4237.1 | 423.71 | 42.371 | 4.2371 |
| | | | | | |
| d. | 9 x 4.82 | 4.338 | 43.38 | 433.8 | 4338 |
| | | | | | |
| | | | | | |

2. YiTing weighs 8.3 kg. Her older brother is 4 times as heavy as her. How much does her older brother's weight in kg?



Multiply a decimal fraction by single-digit whole numbers, including using estimation to confirm the placement of the decimal point. 5/7/13



3. Tim is painting his storage shed. He buys 4 gallons of white paint and 3 gallons of blue paint. If each gallon of white paint costs \$15.72 and each gallon of blue paints is \$21.87, how much will Tim spend in all on paint?

4. Ribbon is sold at 3 yards for \$6.33. Jackie bought 24 yards of ribbon for a project. How much did she pay?



Lesson 12:

Multiply a decimal fraction by single-digit whole numbers, including using estimation to confirm the placement of the decimal point. 5/7/13



1.E.27

| Na | me | | | Date |
|----|----|--------------------|----------------------------|--|
| 1. | Co | mplete the sentenc | es with the correct number | of units and complete the equation. |
| | a. | 3 groups of | _ tenths is 1.5 | 1.5 ÷ 3 = |
| | b. | 6 groups of | _ hundredths is 0.24 | 0.24 ÷ 6 = |
| | c. | 5 groups of | thousandths is 0.045 | 0.045 ÷ 5 = |
| 2. | Со | mplete the number | sentence. Express the quo | otient in units and then in standard form. |
| | a. | 9.36 ÷ 3 = | ones ÷ 3 + | hundredths ÷3 |
| | | = | ones + | hundredths |
| | | = | | |
| | b. | 36.012 ÷ 3 = | ones ÷ 3 + | thousandths ÷ 3 |
| | | = | ones + | thousand ths |
| | | = | | |
| | c. | | tenths ÷ 5 + | |
| | | = | | |
| | | | | |





| d. | 3.545 ÷ 5 = | |
|----|-------------|--|
| | = | |
| | | |
| | = | |

- 3. Find the quotients. Then use words, numbers, or pictures to describe any relationships you notice between each pair of problems and quotients.
 - a. 21÷7=_____ 2.1÷7=_____

b. 48 ÷ 8 = _____ 0.048 ÷ 8 = _____

- 4. Are the quotients below reasonable? Explain your answer.
 - a. 0.54 ÷ 6 = 9

b. 5.4 ÷ 6 = 0.9





c. 54 ÷ 6 = 0.09

5. A toy airplane costs \$4.84. It costs 4 times as much as a toy car. What is the cost of the toy car?

6. Julian bought 3.9 liters of cranberry juice and Jay bought 8.74 liters of apple juice. They mixed the two juices together then poured them equally into 2 bottles. How many liters of juice are in each bottle?



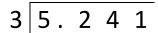
Divide decimals by single-digit whole numbers involving easily identifiable multiples using place value understanding and relate to a written method.



Date _____

- 1. Draw number disks on the place value chart to solve. Show your steps using long division.
 - a. 5.241 ÷ 3 = _____

| Ones | Tenths | Hundredths | Thousand ths |
|------|--------|------------|--------------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |



b. 3.445 ÷ 5 = _____

| Ones | Tenths | Hundredths | Thousandths |
|------|--------|------------|-------------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

5 3.445

2. Solve using the standard algorithm.



Lesson 14: Divide de and relate Date: 5/8/13

Divide decimals with a remainder using place value understanding and relate to a written method.



| a. 0.64 ÷ 4 = | b. 6.45 ÷ 5 = | c. 16.404 ÷ 6 = |
|---------------|---------------|-----------------|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

3. Mrs. Mayuko paid \$40.68 for 3 kg of shrimp. What's the cost of 1 kg of shrimp?

4. The total weight of 6 pieces of butter and a bag of sugar is 3.8 lb. If the weight of the bag of sugar is 1.4 lb., what's the weight of each piece of butter?



Divide decimals with a remainder using place value understanding and relate to a written method. 5/8/13



Date _____

- 1. Draw number disks on the place value chart to solve, and show your steps using long division.
 - a. 0.7 ÷ 4 = _____

| Ones | • | Tenths | Hundredths | Thousandths |
|------|---|--------|------------|-------------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

4 0.7

b. 8.1 ÷ 5 = _____

| Ones | • | Tenths | Hundredths | Thousandths |
|------|---|--------|------------|-------------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

5 8.1

Lesson 15:

Divide decimals using place value understanding, including remainders in the smallest unit. 5/8/13

2. Solve using the standard algorithm.

| a. 0.7÷2= | b. 3.9 ÷ 6 = | c. 9÷4= |
|---------------|--------------|-------------|
| d. 0.92 ÷ 2 = | e. 9.4 ÷ 4 = | f. 91 ÷ 8 = |

3. A rope 8.7 m long is cut into 5 equal pieces. How long is each piece?

4. Yasmine bought 6 gallons of apple juice. After filling up 4 bottles of the same size with apple juice, she had 0.3 gallon of apple juice left. What's the amount of apple juice in each bottle?



Divide decimals using place value understanding, including remainders in the smallest unit. 5/8/13



| Date |
|------|
|------|

Solve using tape diagrams.

 A gardener installed 42.6 meters of fencing in a week. He installed 13.45 meters on Monday and 9.5 meters on Tuesday. He installed the rest of the fence in equal lengths on Wednesday through Friday. How many meters of fencing did he install on each of the last three days?

- 2. Jenny charges \$9.15 an hour to babysit toddlers and \$7.45 an hour to babysit school-aged children.
 - a. If Jenny babysat toddlers for 9 hours and school-aged children for 6 hours, how much money did she earn in all?

b. Jenny wants to earn \$1300 by the end of the summer. How much more will she need to earn to meet her goal?





3. A table and 8 chairs weigh 235.68 pounds together. If the table weighs 157.84 lbs., what is the weight of one chair in pounds?

4. Mrs. Cleaver mixes 1.24 liters of red paint with 3 times as much blue paint to make purple paint. She pours the paint equally into 5 containers. How much blue paint is in each cup? Give you answer in liters.



Solve word problems using decimal operations. 5/8/13

| Α | Multiply. | | # | Correct |
|----|-----------|----|------------|---------|
| 1 | 12 x 10 = | 23 | 34 x 10 = | |
| 2 | 14 x 10 = | 24 | 134 x 10 = | |
| 3 | 15 x 10 = | 25 | 234 x 10 = | |
| 4 | 17 x 10 = | 26 | 334 x 10 = | |
| 5 | 81 x 10 = | 27 | 834 x 10 = | |
| 6 | 10 x 81 = | 28 | 10 x 834 = | |
| 7 | 21 x 10 = | 29 | 45 x 10 = | |
| 8 | 22 x 10 = | 30 | 145 x 10 = | |
| 9 | 23 x 10 = | 31 | 245 x 10 = | |
| 10 | 29 x 10 = | 32 | 345 x 10 = | |
| 11 | 92 x 10 = | 33 | 945 x 10 = | |
| 12 | 10 x 92 = | 34 | 56 x 10 = | |
| 13 | 18 x 10 = | 35 | 456 x 10 = | |
| 14 | 19 x 10 = | 36 | 556 x 10 = | |
| 15 | 20 x 10 = | 37 | 950 x 10 = | |
| 16 | 30 x 10 = | 38 | 10 x 950 = | |
| 17 | 40 x 10 = | 39 | 16 x 10 = | |
| 18 | 80 x 10 = | 40 | 10 x 60 = | |
| 19 | 10 x 80 = | 41 | 493 x 10 = | |
| 20 | 10 x 50 = | 42 | 10 x 84 = | |
| 21 | 10 x 90 = | 43 | 96 x 10 = | |
| 22 | 10 x 70 = | 44 | 10 x 580 = | |

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Reason concretely and pictorially using place value understanding to relate adjacent base ten units from millions to thousandths. 5/7/13



| В | Multiply. | Improvement | # Correct |
|----|-----------|-------------|------------|
| 1 | 13 x 10 = | 23 | 43 x 10 = |
| 2 | 14 x 10 = | 24 | 143 x 10 = |
| 3 | 15 x 10 = | 25 | 243 x 10 = |
| 4 | 19 x 10 = | 26 | 343 x 10 = |
| 5 | 91 x 10 = | 27 | 743 x 10 = |
| 6 | 10 x 91 = | 28 | 10 x 743 = |
| 7 | 31 x 10 = | 29 | 54 x 10 = |
| 8 | 32 x 10 = | 30 | 154 x 10 = |
| 9 | 33 x 10 = | 31 | 254 x 10 = |
| 10 | 38 x 10 = | 32 | 354 x 10 = |
| 11 | 83 x 10 = | 33 | 854 x 10 = |
| 12 | 10 x 83 = | 34 | 65 x 10 = |
| 13 | 28 x 10 = | 35 | 465 x 10 = |
| 14 | 29 x 10 = | 36 | 565 x 10 = |
| 15 | 30 x 10 = | 37 | 960 x 10 = |
| 16 | 40 x 10 = | 38 | 10 x 960 = |
| 17 | 50 x 10 = | 39 | 17 x 10 = |
| 18 | 90 x 10 = | 40 | 10 x 70 = |
| 19 | 10 x 90 = | 41 | 582 x 10 = |
| 20 | 10 x 20 = | 42 | 10 x 73 = |
| 21 | 10 x 60 = | 43 | 98 x 10 = |
| 22 | 10 x 80 = | 44 | 10 x 470 = |

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Reason concretely and pictorially using place value understanding to relate adjacent base ten units from millions to thousandths. 5/7/13



| Α | Multiply. | | | # Correct |
|----|-----------|----|----------|-----------|
| 1 | 1 x 3 = | 23 | 10 x 3 = | |
| 2 | 3 x 1 = | 24 | 9 x 3 = | |
| 3 | 2 x 3 = | 25 | 4 x 3 = | |
| 4 | 3 x 2 = | 26 | 8 x 3 = | |
| 5 | 3 x 3 = | 27 | 5 x 3 = | |
| 6 | 4 x 3 = | 28 | 7 x 3 = | |
| 7 | 3 x 4 = | 29 | 6 x 3 = | |
| 8 | 5 x 3 = | 30 | 3 x 10 = | |
| 9 | 3 x 5 = | 31 | 3 x 5 = | |
| 10 | 6 x 3 = | 32 | 3 x 6 = | |
| 11 | 3 x 6 = | 33 | 3 x 1 = | |
| 12 | 7 x 3 = | 34 | 3 x 9 = | |
| 13 | 3 x 7 = | 35 | 3 x 4 = | |
| 14 | 8 x 3 = | 36 | 3 x 3 = | |
| 15 | 3 x 8 = | 37 | 3 x 2 = | |
| 16 | 9 x 3 = | 38 | 3 x 7 = | |
| 17 | 3 x 9 = | 39 | 3 x 8 = | |
| 18 | 10 x 3 = | 40 | 11 x 3 = | |
| 19 | 3 x 10 = | 41 | 3 x 11 = | |
| 20 | 3 x 3 = | 42 | 12 x 3 = | |
| 21 | 1 x 3 = | 43 | 3 x 13 = | |
| 22 | 2 x 3 = | 44 | 13 x 3 = | |



Use exponents to name place value units and explain patterns in the placement of the decimal point. 5/7/13

1.A.37

| В | Multiply. | Improvemer | nt | # Correct |
|----|-----------|------------|----------|-----------|
| 1 | 3 x 1 = | 23 | 9 x 3 = | |
| 2 | 1 x 3 = | 24 | 3 x 3 = | |
| 3 | 3 x 2 = | 25 | 8 x 3 = | |
| 4 | 2 x 3 = | 26 | 4 x 3 = | |
| 5 | 3 x 3 = | 27 | 7 x 3 = | |
| 6 | 3 x 4 = | 28 | 5 x 3 = | |
| 7 | 4 x 3 = | 29 | 6 x 3 = | |
| 8 | 3 x 5 = | 30 | 3 x 5 = | |
| 9 | 5 x 3 = | 31 | 3 x 10 = | |
| 10 | 3 x 6 = | 32 | 3 x 1 = | |
| 11 | 6 x 3 = | 33 | 3 x 6 = | |
| 12 | 3 x 7 = | 34 | 3 x 4 = | |
| 13 | 7 x 3 = | 35 | 3 x 9 = | |
| 14 | 3 x 8 = | 36 | 3 x 2 = | |
| 15 | 8 x 3 = | 37 | 3 x 7 = | |
| 16 | 3 x 9 = | 38 | 3 x 3 = | |
| 17 | 9 x 3 = | 39 | 3 x 8 = | |
| 18 | 3 x 10 = | 40 | 11 x 3 = | |
| 19 | 10 x 3 = | 41 | 3 x 11 = | |
| 20 | 1 x 3 = | 42 | 13 x 3 = | |
| 21 | 10 x 3 = | 43 | 3 x 13 = | |
| 22 | 2 x 3 = | 44 | 12 x 3 = | |



Use exponents to name place value units and explain patterns in the placement of the decimal point. 5/7/13

1.A.38

| Α | Multiply. | | # Correct |
|----|----------------|----|-----------------------|
| 1 | 62.3 x 10 = | 23 | 3 4.1 x 1000 = |
| 2 | 62.3 x 100 = | 24 | 1 7.6 x 1000 = |
| 3 | 62.3 x 1000 = | 25 | 5 0.01 x 1000 = |
| 4 | 73.6 x 10 = | 26 | 6 0.07 x 1000 = |
| 5 | 73.6 x 100 = | 27 | 7 0.072 x 100 = |
| 6 | 73.6 x 1000 = | 28 | B 0.802 x 10 = |
| 7 | 0.6 x 10 = | 29 | 9 0.019 x 1000 = |
| 8 | 0.06 x 10 = | 30 | 0 7.412 x 1000 = |
| 9 | 0.006 x 10 = | 31 | 1 6.8 x 100 = |
| 10 | 0.3 x 10 = | 32 | 2 4.901 x 10 = |
| 11 | 0.3 x 100 = | 33 | 3 16.07 x 100 = |
| 12 | 0.3 x 1000 = | 34 | 4 9.19 x 10 = |
| 13 | 0.02 x 10 = | 35 | 5 18.2 x 100 = |
| 14 | 0.02 x 100 = | 36 | 6 14.7 x 1000 = |
| 15 | 0.02 x 1000 = | 37 | 7 2.021 x 100 = |
| 16 | 0.008 x 10 = | 38 | B 172.1 x 10 = |
| 17 | 0.008 x 100 = | 39 | 9 3.2 x 20 = |
| 18 | 0.008 x 1000 = | 40 | 0 4.1 x 20 = |
| 19 | 0.32 x 10 = | 41 | 1 3.2 x 30 = |
| 20 | 0.67 x 10 = | 42 | 2 1.3 x 30 = |
| 21 | 0.91 x 100 = | 43 | 3 3.12 x 40 = |
| 22 | 0.74 x 100 = | 44 | 4 14.12 x 40 = |

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Name decimal fractions in expanded, unit, and word forms by applying place value reasoning. 5/7/13

| В | Multiply. | Improvemen | ıt # | Correct |
|----|----------------|------------|----------------|---------|
| 1 | 46.1 x 10 = | 23 | 5.2 x 1000 = | |
| 2 | 46.1 x 100 = | 24 | 8.7 x 1000 = | |
| 3 | 46.1 x 1000 = | 25 | 0.01 x 1000 = | |
| 4 | 89.2 x 10 = | 26 | 0.08 x 1000 = | |
| 5 | 89.2 x 100 = | 27 | 0.083 x 10 = | |
| 6 | 89.2 x 1000 = | 28 | 0.903 x 10 = | |
| 7 | 0.3 x 10 = | 29 | 0.017 x 1000 = | |
| 8 | 0.03 x 10 = | 30 | 8.523 x 1000 = | |
| 9 | 0.003 x 10 = | 31 | 7.9 x 100 = | |
| 10 | 0.9 x 10 = | 32 | 5.802 x 10 = | |
| 11 | 0.9 x 100 = | 33 | 27.08 x 100 = | |
| 12 | 0.9 x 1000 = | 34 | 8.18 x 10 = | |
| 13 | 0.04 x 10 = | 35 | 29.3 x 100 = | |
| 14 | 0.04 x 100 = | 36 | 25.8 x 1000 = | |
| 15 | 0.04 x 1000 = | 37 | 3.032 x 100 = | |
| 16 | 0.007 x 10 = | 38 | 283.1 x 10 = | |
| 17 | 0.007 x 100 = | 39 | 2.1 x 20 = | |
| 18 | 0.007 x 1000 = | 40 | 3.3 x 20 = | |
| 19 | 0.45 x 10 = | 41 | 3.1 x 30 = | |
| 20 | 0.78 x 10 = | 42 | 1.2 x 30 = | |
| 21 | 0.28 x 100 = | 43 | 2.11 x 40 = | |
| 22 | 0.19 x 100 = | 44 | 13.11 x 40 = | |



Name decimal fractions in expanded, unit, and word forms by applying place value reasoning. 5/7/13



1.B.10

| Α | Find the mid | point. | | | # Correct |
|----|--------------|--------|----|------|-----------|
| 1 | 0 | 10 | 23 | 8.5 | 8.6 |
| 2 | 0 | 1 | 24 | 2.8 | 2.9 |
| 3 | 0 | 0.01 | 25 | 0.03 | 0.04 |
| 4 | 10 | 20 | 26 | 0.13 | 0.14 |
| 5 | 1 | 2 | 27 | 0.37 | 0.38 |
| 6 | 2 | 3 | 28 | 80 | 90 |
| 7 | 3 | 4 | 29 | 90 | 100 |
| 8 | 7 | 8 | 30 | 8 | 9 |
| 9 | 1 | 2 | 31 | 9 | 10 |
| 10 | 0.1 | 0.2 | 32 | 0.8 | 0.9 |
| 11 | 0.2 | 0.3 | 33 | 0.9 | 1 |
| 12 | 0.3 | 0.4 | 34 | 0.08 | 0.09 |
| 13 | 0.7 | 0.8 | 35 | 0.09 | 0.1 |
| 14 | 0.1 | 0.2 | 36 | 26 | 27 |
| 15 | 0.01 | 0.02 | 37 | 7.8 | 7.9 |
| 16 | 0.02 | 0.03 | 38 | 1.26 | 1.27 |
| 17 | 0.03 | 0.04 | 39 | 29 | 30 |
| 18 | 0.07 | 0.08 | 40 | 9.9 | 10 |
| 19 | 6 | 7 | 41 | 7.9 | 8 |
| 20 | 16 | 17 | 42 | 1.59 | 1.6 |
| 21 | 38 | 39 | 43 | 1.79 | 1.8 |
| 22 | 0.4 | 0.5 | 44 | 3.99 | 4 |



Lesson 7: Date: Round a given decimal to any place using place value understanding and the vertical number line. 5/7/13

1.C.8

| В | Find the midpoint. | | # Correct | | |
|----|--------------------|------|-----------|------|------|
| 1 | 10 | 20 | 23 | 0.7 | 0.8 |
| 2 | 1 | 2 | 24 | 4.7 | 4.8 |
| 3 | 0.1 | 0.2 | 25 | 2.3 | 2.4 |
| 4 | 0.01 | 0.02 | 26 | 0.02 | 0.03 |
| 5 | 0 | 10 | 27 | 0.12 | 0.13 |
| 6 | 0 | 1 | 28 | 0.47 | 0.48 |
| 7 | 1 | 2 | 29 | 80 | 90 |
| 8 | 2 | 3 | 30 | 90 | 100 |
| 9 | 6 | 7 | 31 | 8 | 9 |
| 10 | 1 | 2 | 32 | 9 | 10 |
| 11 | 0.1 | 0.2 | 33 | 0.8 | 0.9 |
| 12 | 0.2 | 0.3 | 34 | 0.9 | 1 |
| 13 | 0.3 | 0.4 | 35 | 0.08 | 0.09 |
| 14 | 0.6 | 0.7 | 36 | 0.09 | 0.1 |
| 15 | 0.1 | 0.2 | 37 | 36 | 37 |
| 16 | 0.01 | 0.02 | 38 | 6.8 | 6.9 |
| 17 | 0.02 | 0.03 | 39 | 1.46 | 1.47 |
| 18 | 0.03 | 0.04 | 40 | 39 | 40 |
| 19 | 0.06 | 0.07 | 41 | 9.9 | 10 |
| 20 | 7 | 8 | 42 | 6.9 | 7 |
| 21 | 17 | 18 | 43 | 1.29 | 1.3 |
| 22 | 47 | 48 | 44 | 6.99 | 7 |



Lesson 7:

Round a given decimal to any place using place value understanding and the vertical number line. 5/7/13

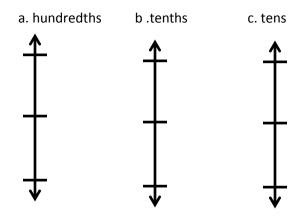
1.C.9

Name _____

Date _____

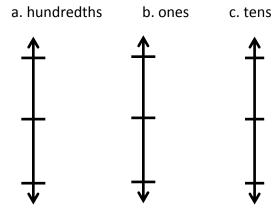
Fill in the table then round to the given place. Label the number lines to show your work. Circle the rounded number.

1. 3.1



| tens | 1s | Tenths | Hundredths | Thousandths |
|------|----|--------|------------|-------------|
| | | | | |
| | | | | |
| | | | | |

2. 115.376



| Tens | Ones | Tenths | Hundredths | Thousandths |
|------|------|--------|------------|-------------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |



Round a given decimal to any place using place value understanding and the vertical number line. 5/7/13



| | # | Correct | |
|--|---|---------|--|
|--|---|---------|--|

| Α | Round to the nearest w | hole number | | # Correct |
|----|------------------------|-------------|---------|-----------|
| 1 | 3.1 ≈ | 23 | 12.51 ≈ | |
| 2 | 3.2 ≈ | 24 | 16.61 ≈ | |
| 3 | 3.3 ≈ | 25 | 17.41 ≈ | |
| 4 | 3.4 ≈ | 26 | 11.51 ≈ | |
| 5 | 3.5 ≈ | 27 | 11.49 ≈ | |
| 6 | 3.6 ≈ | 28 | 13.49 ≈ | |
| 7 | 3.9 ≈ | 29 | 13.51 ≈ | |
| 8 | 13.9 ≈ | 30 | 15.51 ≈ | |
| 9 | 13.1 ≈ | 31 | 15.49 ≈ | |
| 10 | 13.5 ≈ | 32 | 6.3 ≈ | |
| 11 | 7.5 ≈ | 33 | 7.6 ≈ | |
| 12 | 8.5 ≈ | 34 | 49.5 ≈ | |
| 13 | 9.5 ≈ | 35 | 3.45 ≈ | |
| 14 | 19.5 ≈ | 36 | 17.46 ≈ | |
| 15 | 29.5 ≈ | 37 | 11.76 ≈ | |
| 16 | 89.5 ≈ | 38 | 5.2 ≈ | |
| 17 | 2.4 ≈ | 39 | 12.8 ≈ | |
| 18 | 2.41 ≈ | 40 | 59.5 ≈ | |
| 19 | 2.42 ≈ | 41 | 5.45 ≈ | |
| 20 | 2.45 ≈ | 42 | 19.47 ≈ | |
| 21 | 2.49 ≈ | 43 | 19.87 ≈ | |
| 22 | 2.51 ≈ | 44 | 69.51 ≈ | |

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Lesson 9: Date:

Add decimals using place value strategies and relate those strategies to a written method. 5/7/13

| в | Round to the nearest who | | t | # Correct |
|----|--------------------------|----|---------|-----------|
| 1 | 4.1 ≈ | 23 | 13.51 ≈ | |
| 2 | 4.2 ≈ | 24 | 17.61 ≈ | |
| 3 | 4.3 ≈ | 25 | 18.41 ≈ | |
| 4 | 4.4 ≈ | 26 | 12.51 ≈ | |
| 5 | 4.5 ≈ | 27 | 12.49 ≈ | |
| 6 | 4.6 ≈ | 28 | 14.49 ≈ | |
| 7 | 4.9 ≈ | 29 | 14.51 ≈ | |
| 8 | 14.9 ≈ | 30 | 16.51 ≈ | |
| 9 | 14.1 ≈ | 31 | 16.49 ≈ | |
| 10 | 14.5 ≈ | 32 | 7.3 ≈ | |
| 11 | 7.5 ≈ | 33 | 8.6 ≈ | |
| 12 | 8.5 ≈ | 34 | 39.5 ≈ | |
| 13 | 9.5 ≈ | 35 | 4.45 ≈ | |
| 14 | 19.5 ≈ | 36 | 18.46 ≈ | |
| 15 | 29.5 ≈ | 37 | 12.76 ≈ | |
| 16 | 79.5 ≈ | 38 | 6.2 ≈ | |
| 17 | 3.4 ≈ | 39 | 13.8 ≈ | |
| 18 | 3.41 ≈ | 40 | 49.5 ≈ | |
| 19 | 3.42 ≈ | 41 | 6.45 ≈ | |
| 20 | 3.45 ≈ | 42 | 19.48 ≈ | |
| 21 | 3.49 ≈ | 43 | 19.78 ≈ | |
| 22 | 3.51 ≈ | 44 | 59.51 ≈ | |



Add decimals using place value strategies and relate those strategies to a written method. 5/7/13

Α

| Add. | | | | |
|-----------------|--|--|---|---|
| 3 + 1 = | | 23 | 5 + 0.1 = | |
| 3.5 + 1 = | | 24 | 5.7 + 0.1 = | |
| 3.52 + 1 = | 2 | 25 | 5.73 + 0.1 = | |
| 0.3 + 0.1 = | 2 | 26 | 5.736 + 0.1 = | |
| 0.37 + 0.1 = | | 27 | 5.736 + 1 = | |
| 5.37 + 0.1 = | | 28 | 5.736 + 0.01 = | |
| 0.03 + 0.01 = | 2 | 29 | 5.736 + 0.001 = | |
| 0.83 + 0.01 = | | 30 | 6.208 + 0.01 = | |
| 2.83 + 0.01 = | | 31 | 3 + 0.01 = | |
| 30 + 10 = | | 32 | 3.5 + 0.01 = | |
| 32 + 10 = | | 33 | 3.58 + 0.01 = | |
| 32.5 + 10 = | | 34 | 3.584 + 0.01 = | |
| 32.58 + 10 = | | 35 | 3.584 + 0.001 = | |
| 40.789 + 1 = | | 36 | 3.584 + 0.1 = | |
| 4 + 1 = | | 37 | 3.584 + 1 = | |
| 4.6 + 1 = | | 38 | 6.804 + 0.01 = | |
| 4.62 + 1 = | | 39 | 8.642 + 0.001 = | |
| 4.628 + 1 = | | 40 | 7.65 + 0.001 = | |
| 4.628 + 0.1 = | | 41 | 3.987 + 0.1 = | |
| 4.628 + 0.01 = | | 42 | 4.279 + 0.001 = | |
| 4.628 + 0.001 = | Z | 43 | 13.579 + 0.01 = | |
| 27.048 + 0.1 = | | 44 | 15.491 + 0.01 = | |
| | 3.5 + 1 = $3.52 + 1 =$ $0.3 + 0.1 =$ $0.37 + 0.1 =$ $5.37 + 0.1 =$ $0.03 + 0.01 =$ $0.83 + 0.01 =$ $30 + 10 =$ $32 + 10 =$ $32 + 10 =$ $32.5 + 10 =$ $32.58 + 10 =$ $40.789 + 1 =$ $4.0789 + 1 =$ $4.628 + 1 =$ $4.628 + 1 =$ $4.628 + 1 =$ $4.628 + 1 =$ $4.628 + 1 =$ $4.628 + 0.1 =$ $4.628 + 0.1 =$ $4.628 + 0.01 =$ $4.628 + 0.01 =$ $4.628 + 0.01 =$ | 3 + 1 = $3.5 + 1 =$ $3.52 + 1 =$ $0.3 + 0.1 =$ $0.3 + 0.1 =$ $0.37 + 0.1 =$ $5.37 + 0.1 =$ $0.03 + 0.01 =$ $0.83 + 0.01 =$ $2.83 + 0.01 =$ $30 + 10 =$ $32 + 10 =$ $32.5 + 10 =$ $32.58 + 10 =$ $40.789 + 1 =$ $4.62 + 1 =$ $4.628 + 1 =$ $4.628 + 1 =$ $4.628 + 0.1 =$ $4.628 + 0.01 =$ | 3 + 1 =23 $3.5 + 1 =$ 24 $3.52 + 1 =$ 25 $0.3 + 0.1 =$ 26 $0.37 + 0.1 =$ 27 $5.37 + 0.1 =$ 28 $0.03 + 0.01 =$ 29 $0.83 + 0.01 =$ 30 $2.83 + 0.01 =$ 31 $30 + 10 =$ 32 $32 + 10 =$ 33 $32.5 + 10 =$ 34 $32.58 + 10 =$ 35 $40.789 + 1 =$ 36 $4 + 1 =$ 37 $4.6 + 1 =$ 38 $4.628 + 1 =$ 40 $4.628 + 0.1 =$ 41 $4.628 + 0.01 =$ 42 $4.628 + 0.01 =$ 43 | 3 + 1 =23 $5 + 0.1 =$ $3.5 + 1 =$ 24 $5.7 + 0.1 =$ $3.52 + 1 =$ 25 $5.73 + 0.1 =$ $0.3 + 0.1 =$ 26 $5.736 + 0.1 =$ $0.37 + 0.1 =$ 27 $5.736 + 0.1 =$ $0.37 + 0.1 =$ 28 $5.736 + 0.01 =$ $0.03 + 0.01 =$ 29 $5.736 + 0.01 =$ $0.03 + 0.01 =$ 30 $6.208 + 0.01 =$ $0.83 + 0.01 =$ 30 $6.208 + 0.01 =$ $2.83 + 0.01 =$ 31 $3 + 0.01 =$ $30 + 10 =$ 32 $3.5 + 0.01 =$ $32 + 10 =$ 33 $3.58 + 0.01 =$ $32.5 + 10 =$ 34 $3.584 + 0.01 =$ $32.58 + 10 =$ 35 $3.584 + 0.01 =$ $40.789 + 1 =$ 36 $3.584 + 0.1 =$ $4.62 + 1 =$ 39 $8.642 + 0.001 =$ $4.628 + 1 =$ 40 $7.65 + 0.001 =$ $4.628 + 0.1 =$ 41 $3.987 + 0.1 =$ $4.628 + 0.1 =$ 42 $4.279 + 0.001 =$ $4.628 + 0.01 =$ 42 $4.279 + 0.001 =$ |

Correct _____

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Lesson 12: Date: Multiply a decimal fraction by single-digit whole numbers, including using estimation to confirm the placement of the decimal point. 5/7/13



| В | Add. | Improvemer | nt # Correct |
|----|-----------------|------------|-----------------|
| 1 | 2 + 1 = | 23 | 4 + 0.1 = |
| 2 | 2.5 + 1 = | 24 | 4.7 + 0.1 = |
| 3 | 2.53 + 1 = | 25 | 4.73 + 0.1 = |
| 4 | 0.2 + 0.1 = | 26 | 4.736 + 0.1 = |
| 5 | 0.27 + 0.1 = | 27 | 4.736 + 1 = |
| 6 | 5.27 + 0.1 = | 28 | 4.736 + 0.01 = |
| 7 | 0.02 + 0.01 = | 29 | 4.736 + 0.001 = |
| 8 | 0.82 + 0.01 = | 30 | 5.208 + 0.01 = |
| 9 | 4.82 + 0.01 = | 31 | 2 + 0.01 = |
| 10 | 20 + 10 = | 32 | 2.5 + 0.01 = |
| 11 | 23 + 10 = | 33 | 2.58 + 0.01 = |
| 12 | 23.5 + 10 = | 34 | 2.584 + 0.01 = |
| 13 | 23.58 + 10 = | 35 | 2.584 + 0.001 = |
| 14 | 30.789 + 1 = | 36 | 2.584 + 0.1 = |
| 15 | 3 + 1 = | 37 | 2.584 + 1 = |
| 16 | 3.6 + 1 = | 38 | 5.804 + 0.01 = |
| 17 | 3.62 + 1 = | 39 | 7.642 + 0.001 = |
| 18 | 3.628 + 1 = | 40 | 6.75 + 0.001 = |
| 19 | 3.628 + 0.1 = | 41 | 2.987 + 0.1 = |
| 20 | 3.628 + 0.01 = | 42 | 3.279 + 0.001 = |
| 21 | 3.628 + 0.001 = | 43 | 12.579 + 0.01 = |
| 22 | 37.048 + 0.1 = | 44 | 14.391 + 0.01 = |



Lesson 12: Date: Multiply a decimal fraction by single-digit whole numbers, including using estimation to confirm the placement of the decimal point. 5/7/13



| Α | Subtract. | | | # | Correct |
|----|-----------------|---|----|-----------------|---------|
| 1 | 5 - 1 = | - | 23 | 7.985 - 0.002 = | |
| 2 | 5.9 - 1 = | | 24 | 7.985 - 0.004 = | |
| 3 | 5.93 - 1 = | | 25 | 2.7 - 0.1 = | |
| 4 | 5.932 - 1 = | | 26 | 2.785 - 0.1 = | |
| 5 | 5.932 - 2 = | • | 27 | 2.785 - 0.5 = | |
| 6 | 5.932 - 4 = | • | 28 | 4.913 - 0.4 = | |
| 7 | 0.5 - 0.1 = | • | 29 | 3.58 - 0.01 = | |
| 8 | 0.53 - 0.1 = | | 30 | 3.586 - 0.01 = | |
| 9 | 0.539 - 0.1 = | | 31 | 3.586 - 0.05 = | |
| 10 | 8.539 - 0.1 = | | 32 | 7.982 - 0.04 = | |
| 11 | 8.539 - 0.2 = | | 33 | 6.126 - 0.001 = | |
| 12 | 8.539 - 0.4 = | | 34 | 6.126 - 0.004 = | |
| 13 | 0.05 - 0.01 = | • | 35 | 9.348 - 0.006 = | |
| 14 | 0.057 - 0.01 = | • | 36 | 8.347 - 0.3 = | |
| 15 | 1.057 - 0.01 = | • | 37 | 9.157 - 0.05 = | |
| 16 | 1.857 - 0.01 = | | 38 | 6.879 - 0.009 = | |
| 17 | 1.857 - 0.02 = | | 39 | 6.548 - 2 = | |
| 18 | 1.857 - 0.04 = | | 40 | 6.548 - 0.2 = | |
| 19 | 0.005 - 0.001 = | | 41 | 6.548 - 0.02 = | |
| 20 | 7.005 - 0.001 = | | 42 | 6.548 - 0.002 = | |
| 21 | 7.905 - 0.001 = | | 43 | 6.196 - 0.06 = | |
| 22 | 7.985 - 0.001 = | • | 44 | 9.517 - 0.004 = | |



Lesson 13:

Divide decimals by single-digit whole numbers involving easily identifiable multiples using place value understanding and relate to a written method. 5/7/13



| В | Subtract. | Improveme | nt # | # Correct |
|----|-----------------|-----------|-----------------|-----------|
| 1 | 6 - 1 = | . 23 | 7.986 - 0.002 = | |
| 2 | 6.9 - 1 = | . 24 | 7.986 - 0.004 = | |
| 3 | 6.93 - 1 = | . 25 | 3.7 - 0.1 = | |
| 4 | 6.932 - 1 = | . 26 | 3.785 - 0.1 = | |
| 5 | 6.932 - 2 = | . 27 | 3.785 - 0.5 = | |
| 6 | 6.932 - 4 = | . 28 | 5.924 - 0.4 = | |
| 7 | 0.6 - 0.1 = | . 29 | 4.58 - 0.01 = | |
| 8 | 0.63 - 0.1 = | . 30 | 4.586 - 0.01 = | |
| 9 | 0.639 - 0.1 = | . 31 | 4.586 - 0.05 = | |
| 10 | 8.639 - 0.1 = | . 32 | 6.183 - 0.04 = | |
| 11 | 8.639 - 0.2 = | . 33 | 7.127 - 0.001 = | |
| 12 | 8.639 - 0.4 = | . 34 | 7.127 - 0.004 = | |
| 13 | 0.06 - 0.01 = | . 35 | 1.459 - 0.006 = | |
| 14 | 0.067 - 0.01 = | . 36 | 8.457 - 0.4 = | |
| 15 | 1.067 - 0.01 = | . 37 | 1.267 - 0.06 = | |
| 16 | 1.867 - 0.01 = | . 38 | 7.981 - 0.001 = | |
| 17 | 1.867 - 0.02 = | . 39 | 7.548 - 2 = | |
| 18 | 1.867 - 0.04 = | . 40 | 7.548 - 0.2 = | |
| 19 | 0.006 - 0.001 = | . 41 | 7.548 - 0.02 = | |
| 20 | 7.006 - 0.001 = | . 42 | 7.548 - 0.002 = | |
| 21 | 7.906 - 0.001 = | . 43 | 7.197 - 0.06 = | |
| 22 | 7.986 - 0.001 = | . 44 | 1.627 - 0.004 = | |



Date:

Divide decimals by single-digit whole numbers involving easily identifiable multiples using place value understanding and relate to a written method. 5/7/13



| Α | Solve. | | # C | Correct |
|----|---------------------------|----|-----------------------------|---------|
| 1 | 10 x 10 = | 23 | $24 \times 10^2 =$ | |
| 2 | 10 ² = | 24 | 24.7 x 10 ² = | |
| 3 | $10^2 \times 10 =$ | 25 | 24.07 x 10 ² = | |
| 4 | 10 ³ = | 26 | 24.007 x 10 ² = | |
| 5 | $10^3 \times 10 =$ | 27 | 53 x 1000 = | |
| 6 | 10 ⁴ = | 28 | 53 x 10 ³ = | |
| 7 | 3 x 100 = | 29 | 53.8 x 10 ³ = | |
| 8 | 3 x 10 ² = | 30 | 53.08 x 10 ³ = | |
| 9 | $3.1 \times 10^2 =$ | 31 | $53.082 \times 10^3 =$ | |
| 10 | 3.15 x 10 ² = | 32 | 9.1 x 10,000 = | |
| 11 | 3.157 x 10 ² = | 33 | $9.1 \times 10^4 =$ | |
| 12 | 4 x 1000 = | 34 | 91.4 x 10 ⁴ = | |
| 13 | $4 \times 10^3 =$ | 35 | $9.104 \times 10^4 =$ | |
| 14 | $4.2 \times 10^3 =$ | 36 | 9.107 x 10 ⁴ = | |
| 15 | $4.28 \times 10^3 =$ | 37 | $1.2 \times 10^2 =$ | |
| 16 | $4.283 \times 10^3 =$ | 38 | $0.35 \times 10^3 =$ | |
| 17 | 5 x 10,000 = | 39 | $5.492 \times 10^4 =$ | |
| 18 | 5 x 10 ⁴ = | 40 | 8.04 x 10 ³ = | |
| 19 | 5.7 x 10 ⁴ = | 41 | $7.109 \times 10^4 =$ | |
| 20 | $5.73 \times 10^4 =$ | 42 | $0.058 \times 10^2 =$ | |
| 21 | $5.731 \times 10^4 =$ | 43 | 20.78 x 10 ³ = | |
| 22 | 24 x 100 = | 44 | 420.079 x 10 ² = | |
| | | | | |



Lesson 15: Date: Divide decimals using place value understanding, including remainders in the smallest unit. 5/8/13

1.F.34

| в | Solve. | Improvement _ | # Correct |
|----|---------------------------|---------------|-----------------------------|
| 1 | 10 x 10 x 1 = | 23 | $42 \times 10^2 =$ |
| 2 | 10 ² = | 24 | $42.7 \times 10^2 =$ |
| 3 | $10^2 \times 10 =$ | 25 | $42.07 \times 10^2 =$ |
| 4 | 10 ³ = | 26 | 42.007 x 10 ² = |
| 5 | $10^3 \times 10 =$ | 27 | 35 x 1000 = |
| 6 | 10 ⁴ = | 28 | 35 x 10 ³ = |
| 7 | 4 x 100 = | 29 | $35.8 \times 10^3 =$ |
| 8 | 4 x 10 ² = | 30 | $35.08 \times 10^3 =$ |
| 9 | $4.1 \times 10^2 =$ | 31 | $35.082 \times 10^3 =$ |
| 10 | 4.15 x 10 ² = | 32 | 8.1 x 10,000 = |
| 11 | 4.157 x 10 ² = | 33 | 8.1 x 10 ⁴ = |
| 12 | 5 x 1000 = | 34 | 81.4 x 10 ⁴ = |
| 13 | 5 x 10 ³ = | 35 | $8.104 \times 10^4 =$ |
| 14 | 5.2 x 10 ³ = | 36 | 8.107 x 10 ⁴ = |
| 15 | 5.28 x 10 ³ = | 37 | $1.3 \times 10^2 =$ |
| 16 | 5.283 x 10 ³ = | 38 | $0.53 \times 10^3 =$ |
| 17 | 7 x 10,000 = | 39 | $4.391 \times 10^4 =$ |
| 18 | $7 \times 10^4 =$ | 40 | $7.03 \times 10^3 =$ |
| 19 | $7.5 \times 10^4 =$ | 41 | $6.109 \times 10^4 =$ |
| 20 | $7.53 \times 10^4 =$ | 42 | $0.085 \times 10^2 =$ |
| 21 | 7.531 x 10 ⁴ = | 43 | $30.87 \times 10^3 =$ |
| 22 | 42 x 100 = | 44 | 530.097 x 10 ² = |



Divide decimals using place value understanding, including remainders in the smallest unit. 5/8/13

1.F.35

| Α | Solve. | | # C | Correct |
|----|---------------------------|----|------------------------|---------|
| 1 | 10 x 10 = | 23 | $3,400 \div 10^2 =$ | |
| 2 | 10 ² = | 24 | $3,470 \div 10^2 =$ | |
| 3 | $10^2 \times 10 =$ | 25 | $3,407 \div 10^2 =$ | |
| 4 | 10 ³ = | 26 | $3,400.7 \div 10^2 =$ | |
| 5 | $10^3 \times 10 =$ | 27 | 63,000 ÷ 1000 = | |
| 6 | 10 ⁴ = | 28 | $63,000 \div 10^3 =$ | |
| 7 | 3 x 100 = | 29 | $63,800 \div 10^3 =$ | |
| 8 | 3 x 10 ² = | 30 | $63,080 \div 10^3 =$ | |
| 9 | $3.1 \times 10^2 =$ | 31 | $63,082 \div 10^3 =$ | |
| 10 | 3.15 x 10 ² = | 32 | 81,000 ÷ 10,000 = | |
| 11 | 3.157 x 10 ² = | 33 | $81,000 \div 10^4 =$ | |
| 12 | 4 x 1000 = | 34 | $81,400 \div 10^4 =$ | |
| 13 | 4 x 10 ³ = | 35 | $81,040 \div 10^4 =$ | |
| 14 | 4.2 x 10 ³ = | 36 | $91,070 \div 10^4 =$ | |
| 15 | $4.28 \times 10^3 =$ | 37 | $120 \div 10^2 =$ | |
| 16 | 4.283 x 10 ³ = | 38 | $350 \div 10^3 =$ | |
| 17 | 5 x 10,000 = | 39 | $45,920 \div 10^4 =$ | |
| 18 | 5 x 10 ⁴ = | 40 | $6,040 \div 10^3 =$ | |
| 19 | 5.7 x 10 ⁴ = | 41 | $61,080 \div 10^4 =$ | |
| 20 | 5.73 x 10 ⁴ = | 42 | $7.8 \div 10^2 =$ | |
| 21 | 5.731 x 10 ⁴ = | 43 | $40,870 \div 10^3 =$ | |
| 22 | 24 x 100 = | 44 | $52,070.9 \div 10^2 =$ | |



Lesson 16: Date:

Solve word problems using decimal operations. 5/8/13



1.F.48

| в | Solve. | Improvement _ | # Correct |
|----|---------------------------------|---------------|------------------------|
| 1 | 10 x 10 x 1 = | 23 | $4,370 \div 10^2 =$ |
| 2 | 10 ² = | 24 | $4,370 \div 10^2 =$ |
| 3 | $10^2 \times 10 =$ | 25 | $4,307 \div 10^2 =$ |
| 4 | 10 ³ = | 26 | $4,300.7 \div 10^2 =$ |
| 5 | $10^3 \times 10 =$ | 27 | 73,000 ÷ 1000 = |
| 6 | 10 ⁴ = | 28 | $73,000 \div 10^3 =$ |
| 7 | 500 ÷ 100 = | 29 | $73,800 \div 10^3 =$ |
| 8 | $500 \div 10^2 =$ | 30 | $73,080 \div 10^3 =$ |
| 9 | 510 ÷ 10 ² = | 31 | $73,082 \div 10^3 =$ |
| 10 | 516 ÷ 10 ² = | 32 | 91,000 ÷ 10,000 = |
| 11 | $516.7 \div 10^2 =$ | 33 | $91,000 \div 10^4 =$ |
| 12 | 6,000 ÷ 1000 = | 34 | $91,400 \div 10^4 =$ |
| 13 | $6,000 \div 10^3 =$ | 35 | $91,040 \div 10^4 =$ |
| 14 | $6,200 \div 10^3 =$ | 36 | $81,070 \div 10^4 =$ |
| 15 | $6,280 \div 10^3 =$ | 37 | $170 \div 10^2 =$ |
| 16 | $6,283 \div 10^3 =$ | 38 | $450 \div 10^3 =$ |
| 17 | 70,000 ÷ 10,000 = | 39 | $54,920 \div 10^4 =$ |
| 18 | $70,000 \div 10^4 =$ | 40 | $4,060 \div 10^3 =$ |
| 19 | 76,000 \div 10 ⁴ = | 41 | $71,080 \div 10^4 =$ |
| 20 | 76,300 \div 10 ⁴ = | 42 | $8.7 \div 10^2 =$ |
| 21 | 76,310 \div 10 ⁴ = | 43 | $60,470 \div 10^3 =$ |
| 22 | 4,300 ÷ 100 = | 44 | $72,050.9 \div 10^2 =$ |
| | | | |



Solve word problems using decimal operations. 5/8/13