Name _____ Date _____

1. Fill in the blanks using your knowledge of place value units and basic facts.

   a. 43 × 30

      Think: 43 ones × 3 tens = _____ tens

      43 × 30 = _____

   b. 430 × 30

      Think: 43 tens × 3 tens = _____ hundreds

      430 × 30 = _____

   c. 830 × 20

      Think: 83 tens × 2 tens = 166 _____

      830 × 20 = _____

   d. 4,400 × 400

      _____ hundreds × _____ hundreds = 176 _____

      4,400 × 400 = _____

   e. 80 × 5,000

      _____ tens × _____ thousands = 40 _____

      80 × 5,000 = _____

2. Determine if these equations are true or false. Defend your answer using your knowledge of place value and the commutative, associative, and/or distributive properties.

   a. 35 hundreds = 5 tens × 7 tens

   b. 770 × 6 = 77 × 6 × 100

   c. 50 tens × 4 hundreds = 40 tens × 5 hundreds

   d. 24 × 10 × 90 = 90 × 2,400

3. Find the products. Show your thinking. The first row gives some ideas for showing your thinking.

a.	5 × 5 = 25	5 × 50 = 25 × 10 = 250	50 × 50 = (5 × 10) × (5 × 10) = (5 × 5) × 100 = 2,500	50 × 500 = (5 × 5) × (10 × 100) = 25,000
b.	80 × 5	80 × 50	800 × 500	8,000 × 50
c.	637 × 3	6,370 × 30	6,370 × 300	63,700 × 300

4. A concrete stepping-stone measures 20 square inches. What is the area of 30 such stones?

5. A number is 42,300 when multiplied by 10. Find the product of this number and 500.

Name _____ Date _____

1. Round the factors to estimate the products.

   a. 697 × 82 ≈ _____ × _____ = _____

   A reasonable estimate for 697 × 82 is _____.

   b. 5,897 × 67 ≈ _____ × _____ = _____

   A reasonable estimate for 5,897 × 67 is _____.

   c. 8,840 × 45 ≈ _____ × _____ = _____

   A reasonable estimate for 8,840 × 45 is _____.

2. Complete the table using your understanding of place value and knowledge of rounding to estimate the product.

Expressions	Rounded Factors	Estimate
a. 3,409 × 73	3,000 × 70	210,000
b. 82,290 × 240		
c. 9,832 × 39		
d. 98 tens × 36 tens		
e. 893 hundreds × 85 tens		

3. The estimated answer to a multiplication problem is 800,000. Which of the following expressions could result in this answer? Explain how you know.

   8,146 × 12 81,467 × 121 8,146 × 121 81,477 × 1,217

4. Fill in the blank with the missing estimate.

   a. 751 × 34 ≈ _____ × _____ = 24,000

   b. 627 × 674 ≈ _____ × _____ = 420,000

   c. 7,939 × 541 ≈ _____ × _____ = 4,000,000

5. In a single season, the New York Yankees sell an average of 42,362 tickets for each of their 81 home games. About how many tickets do they sell for an entire season of home games?

6. Raphael wants to buy a new car.

   a. He needs a down payment of $3,000. If he saves $340 each month, about how many months will it take him to save the down payment?

   b. His new car payment will be $288 each month for five years. What is the total of these payments?

Name _____ Date _____

1. Draw a model. Then, write the numerical expressions.

a. The sum of 21 and 4, doubled	b. 5 times the sum of 7 and 23
c. 2 times the difference between 49.5 and 37.5	d. The sum of 3 fifteens and 4 twos
e. The difference between 9 thirty-sevens and 8 thirty-sevens	f. Triple the sum of 45 and 55

2. Write the numerical expressions in words. Then, solve.

Expression	Words	The Value of the Expression
a. $10 \times (2.5 + 13.5)$		
b. $(98 - 78) \times 11$		
c. $(71 + 29) \times 26$		
d. $(50 \times 2) + (15 \times 2)$		

3. Compare the two expressions using > , < , or = . In the space beneath each pair of expressions, explain how you can compare without calculating. Draw a model if it helps you.

a. $93 \times (40 + 2)$	◯	$(40 + 2) \times 39$
b. 61×25	◯	60 twenty-fives minus 1 twenty-five

4. Larry claims that (14 + 12) × (8 + 12) and (14 × 12) + (8 × 12) are equivalent because they have the same digits and the same operations.

   a. Is Larry correct? Explain your thinking.

   b. Which expression is greater? How much greater?

Name _____ Date _____

1. Circle each expression that is not equivalent to the expression in **bold**.

   a. **37 × 19**

   37 nineteens | (30 × 19) – (7 × 29) | 37 × (20 – 1) | (40 – 2) × 19

   b. **26 × 35**

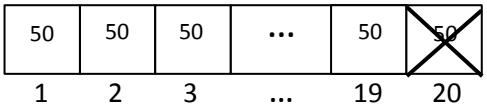
   35 twenty-sixes | (26 + 30) × (26 + 5) | (26 × 30) + (26 × 5) | 35 × (20 + 60)

   c. **34 × 89**

   34 × (80 + 9) | (34 × 8) + (34 × 9) | 34 × (90 – 1) | 89 thirty-fours

2. Solve using mental math. Draw a tape diagram and fill in the blanks to show your thinking. The first one is partially done for you.

a. 19 × 50 = _____ fifties



Think: 20 fifties – 1 fifty

= (_____ × 50) – (_____ × 50)

= _____ – _____

= _____

b. 11 × 26 = _____ twenty-sixes

Think: _____ twenty-sixes + _____ twenty-six

= (_____ × 26) + (_____ × 26)

= _____ + _____

= _____

c. 49 × 12 = _____ twelves Think: _____ twelves – 1 twelve = (_____ × 12) – (_____ × 12) = _____ – _____ = _____	d. 12 × 25 = _____ twenty-fives Think: _____ twenty-fives + _____ twenty-fives = (_____ × 25) + (_____ × 25) = _____ + _____ = _____

3. Define the unit in word form and complete the sequence of problems as was done in the lesson.

a. 29 × 12 = 29 _____ Think: 30 _____ – 1 _____ = (30 × _____) – (1 × _____) = _____ – _____ = _____	b. 11 × 31 = 31 _____ Think: 30 _____ + 1 _____ = (30 × _____) + (1 × _____) = _____ + _____ = _____

c. 19 × 11 = 19 _____ Think: 20 _____ – 1 _____ = (20 × _____) – (1 × _____) = _____ – _____ = _____	d. 50 × 13 = 13 _____ Think: 10 _____ + 3 _____ = (10 × _____) + (3 × _____) = _____ + _____ = _____

4. How can 12 × 50 help you find 12 × 49?

5. Solve mentally.

   a. 16 × 99 = _____

   b. 20 × 101 = _____

6. Joy is helping her father to build a rectangular deck that measures 14 ft by 19 ft. Find the area of the deck using a mental strategy. Explain your thinking.

7. The Lason School turns 101 years old in June. In order to celebrate, they ask each of the 23 classes to collect 101 items and make a collage. How many total items will be in the collage? Use mental math to solve. Explain your thinking.

Name _____ Date _____

1. Draw an area model, and then solve using the standard algorithm. Use arrows to match the partial products from the area model to the partial products in the algorithm.

   a. 24 × 21 = _____

   2 4
   × 2 1

   b. 242 × 21 = _____

   2 4 2
   × 2 1

2. Solve using the standard algorithm.

   a. 314 × 22 = _____ b. 413 × 22 = _____ c. 213 × 32 = _____

3. A young snake measures 0.23 meters long. During the course of his lifetime, he will grow to be 13 times his current length. What will his length be when he is full grown?

4. Zenin earns $142 per shift at his new job. During a pay period, he works 12 shifts. What would his pay be for that period?

Name _____ Date _____

1. Draw an area model. Then, solve using the standard algorithm. Use arrows to match the partial products from your area model to the partial products in the algorithm.

   a. 27 × 36

$$\begin{array}{r} 2\,7 \\ \times\ 3\,6 \\ \hline \end{array}$$

   b. 527 × 36

$$\begin{array}{r} 5\,2\,7 \\ \times\ 3\,6 \\ \hline \end{array}$$

2. Solve using the standard algorithm.

   a. 649 × 53

   b. 496 × 53

   c. 758 × 46

   d. 529 × 48

3. Each of the 25 students in Mr. McDonald's class sold 16 raffle tickets. If each ticket costs $15, how much money did Mr. McDonald's students raise?

4. Jayson buys a car and pays by installments. Each installment is $567 per month. After 48 months, Jayson owes $1,250. What was the total price of the vehicle?

Name _____ Date _____

1. Draw an area model. Then, solve using the standard algorithm. Use arrows to match the partial products from your area model to the partial products in your algorithm.

   a. 273 × 346

   $$\begin{array}{r} 2\,7\,3 \\ \times\ 3\,4\,6 \\ \hline \end{array}$$

   b. 273 × 306

   $$\begin{array}{r} 2\,7\,3 \\ \times\ 3\,0\,6 \\ \hline \end{array}$$

   c. Both Parts (a) and (b) have three-digit multipliers. Why are there three partial products in Part (a) and only two partial products in Part (b)?

2. Solve by drawing the area model and using the standard algorithm.

   a. 7,481 × 290

   b. 7,018 × 209

3. Solve using the standard algorithm.

   a. 426 × 357

   b. 1,426 × 357

c. 426 × 307

d. 1,426 × 307

4. The Hudson Valley Renegades Stadium holds a maximum of 4,505 people. During the height of their popularity, they sold out 219 consecutive games. How many tickets were sold during this time?

5. One Saturday at the farmer's market, each of the 94 vendors made $502 in profit. How much profit did all vendors make that Saturday?

Name _____ Date _____

1. Estimate the product first. Solve by using the standard algorithm. Use your estimate to check the reasonableness of the product.

a. 312 × 149 ≈ 300 × 100 = 30,000 3 1 2 × 1 4 9	b. 743 × 295	c. 428 × 637
d. 691 × 305	e. 4,208 × 606	f. 3,068 × 523
g. 430 × 3,064	h. 3,007 × 502	i. 254 × 6,104

2. When multiplying 1,729 times 308, Clayton got a product of 53,253. Without calculating, does his product seem reasonable? Explain your thinking.

3. A publisher prints 1,912 copies of a book in each print run. If they print 305 runs, the manager wants to know about how many books will be printed. What is a reasonable estimate?

Name _____ Date _____

Solve.

1. Jeffery bought 203 sheets of stickers. Each sheet has a dozen stickers. He gave away 907 stickers to his family and friends on Valentine's Day. How many stickers does Jeffery have remaining?

2. During the 2011 season, a quarterback passed for 302 yards per game. He played in all 16 regular season games that year.

   a. For how many total yards did the quarterback pass?

   b. If he matches this passing total for each of the next 13 seasons, how many yards will he pass for in his career?

3. Bao saved $179 a month. He saved $145 less than Ada each month. How much would Ada save in three and a half years?

4. Mrs. Williams is knitting a blanket for her newborn granddaughter. The blanket is 2.25 meters long and 1.8 meters wide. What is the area of the blanket? Write the answer in centimeters.

5. Use the chart to solve.

Soccer Field Dimensions

	FIFA Regulation (in yards)	New York State High Schools (in yards)
Minimum Length	110	100
Maximum Length	120	120
Minimum Width	70	55
Maximum Width	80	80

a. Write an expression to find the difference in the maximum area and minimum area of a NYS high school soccer field. Then, evaluate your expression.

b. Would a field with a width of 75 yards and an area of 7,500 square yards be within FIFA regulation? Why or why not?

c. It costs $26 to fertilize, water, mow, and maintain each square yard of a full size FIFA field (with maximum dimensions) before each game. How much will it cost to prepare the field for next week's match?

Name _____ Date _____

1. Estimate the product. Solve using an area model and the standard algorithm. Remember to express your products in standard form.

   a. 53 × 1.2 ≈ _____ × _____ = _____

   1 2 (tenths)

   × 5 3

   b. 2.1 × 82 ≈ _____ × _____ = _____

   2 1 (tenths)

   × 8 2

2. Estimate. Then, use the standard algorithm to solve. Express your products in standard form.

   a. 4.2 × 34 ≈ _____ × _____ = _____

   4 2 (tenths)

   × 3 4

   b. 65 × 5.8 ≈ _____ × _____ = _____

   5 8 (tenths)

   × 6 5

c. $3.3 \times 16 \approx$ _____ × _____ = _____

d. $15.6 \times 17 \approx$ _____ × _____ = _____

e. $73 \times 2.4 \approx$ _____ × _____ = _____

f. $193.5 \times 57 \approx$ _____ × _____ = _____

3. Mr. Jansen is building an ice rink in his backyard that will measure 8.4 meters by 22 meters. What is the area of the rink?

4. Rachel runs 3.2 miles each weekday and 1.5 miles each day of the weekend. How many miles will she have run in 6 weeks?

Name _____ Date _____

1. Estimate the product. Solve using the standard algorithm. Use the thought bubbles to show your thinking. (Draw an area model on a separate sheet if it helps you.)

a. 2.42 × 12 ≈ _____ × _____ = _____

Think!
2.42 × 100 = 242

2. 4 2
× 1 2

2.42 × 12 = _____

Think! 2,904 is 100 times too large! What is the real product?

2,904 ÷ 100 = 29.04

b. 4.13 × 37 ≈ _____ × _____ = _____

4 . 1 3
× 3 7

4.13 × 37 = _____

2. Solve using the standard algorithm.

   a. 2.03 × 13

   b. 53.16 × 34

   c. 371.23 × 53

   d. 1.57 × 432

3. Use the whole number product and place value reasoning to place the decimal point in the second product. Explain how you know.

   a. If 36 × 134 = 4,824 then 36 × 1.34 = _____

   b. If 84 × 2,674 = 224,616 then 84 × 26.74 = _____

   c. 19 × 3,211 = 61,009 then 321.1 × 19 = _____

4. A slice of pizza costs $1.57. How much will 27 slices cost?

5. A spool of ribbon holds 6.75 meters. A craft club buys 21 spools.

   a. What is the total cost if the ribbon sells for $2 per meter?

   b. If the club uses 76.54 meters to complete a project, how much ribbon will be left?

Name _____ Date _____

1. Estimate. Then, solve using the standard algorithm. You may draw an area model if it helps you.

   a. 24 × 2.31 ≈ _____ × _____ = _____

$$\begin{array}{r} 2.31 \\ \times \quad 24 \\ \hline \end{array}$$

   b. 5.42 × 305 ≈ _____ × _____ = _____

$$\begin{array}{r} 5.42 \\ \times 305 \\ \hline \end{array}$$

2. Estimate. Then, solve using the standard algorithm. Use a separate sheet to draw the area model if it helps you.

a. $1.23 \times 21 \approx$ _____ × _____ = _____

b. $3.2 \times 41 \approx$ _____ × _____ = _____

c. $0.32 \times 41 \approx$ _____ × _____ = _____

d. $0.54 \times 62 \approx$ _____ × _____ = _____

e. $6.09 \times 28 \approx$ _____ × _____ = _____

f. $6.83 \times 683 \approx$ _____ × _____ = _____

g. $6.09 \times 208 \approx$ _____ × _____ = _____

h. $171.76 \times 555 \approx$ _____ × _____ = _____

3. Eric's goal is to walk 2.75 miles to and from the park every day for an entire year. If he meets his goal, how many miles will Eric walk?

4. Art galleries often price paintings by the square inch. If a painting measures 22.5 inches by 34 inches and costs $4.15 per square inch, what is the selling price for the painting?

5. Gerry spends $1.25 each day on lunch at school. On Fridays, she buys an extra snack for $0.55. How much money will she spend in two weeks?

Name _____ Date _____

1. Solve. The first one is done for you.

a. Convert weeks to days. 6 weeks = 6 × (1 week) = 6 × (7 days) = 42 days	b. Convert years to days. 7 years = _____ × (_____ year) = _____ × (_____ days) = _____ days
c. Convert meters to centimeters. 4.5 m = _____ × (_____ m) = _____ × (_____ cm) = _____ cm	d. Convert pounds to ounces. 12.6 pounds
e. Convert kilograms to grams. 3.09 kg	f. Convert yards to inches. 245 yd

2. After solving, write a statement to express each conversion. The first one is done for you.

a. Convert the number of hours in a day to minutes. 24 hours = 24 × (1 hour) = 24 × (60 minutes) = 1,440 minutes One day has 24 hours, which is the same as 1,440 minutes.	b. A newborn giraffe weighs about 65 kilograms. How much does it weigh in grams?
c. The average height of a female giraffe is 4.6 meters. What is her height in centimeters?	d. The capacity of a beaker is 0.1 liter. Convert this to milliliters.
e. A pig weighs 9.8 pounds. Convert the pig's weight to ounces.	f. A marker is 0.13 meters long. What is the length in millimeters?

Name _____ Date _____

1. Solve. The first one is done for you.

a. Convert days to weeks. 42 days = 42 × (1 day) $= 42 \times \left(\frac{1}{7} \text{ week}\right)$ $= \frac{42}{7}$ week = 6 weeks	b. Convert quarts to gallons. 36 quarts = _____ × (1 quart) $=$ _____ $\times \left(\frac{1}{4} \text{ gallon}\right)$ = _____ gallons = _____ gallons
c. Convert centimeters to meters. 760 cm = _____ × (_____ cm) = _____ × (_____ m) = _____ m	d. Convert meters to kilometers. 2,485 m = _____ × (_____ m) = _____ × (0.001 km) = _____ km
e. Convert grams to kilograms. 3,090 g =	f. Convert milliliters to liters. 205 mL =

2. After solving, write a statement to express each conversion. The first one is done for you.

a. The screen measures 36 inches. Convert 36 inches to feet. 36 inches = 36 × (1 inch) $= 36 \times \left(\frac{1}{12} \text{ feet}\right)$ $= \frac{36}{12}$ feet = 3 feet The screen measures 36 inches or 3 feet.	b. A jug of juice holds 8 cups. Convert 8 cups to pints.
c. The length of the flower garden is 529 centimeters. What is its length in meters?	d. The capacity of a container is 2,060 milliliters. Convert this to liters.
e. A hippopotamus weighs 1,560,000 grams. Convert the hippopotamus' weight to kilograms.	f. The distance was 372,060 meters. Convert the distance to kilometers.

Name _____ Date _____

Solve.

1. Tia cut a 4-meter 8-centimeter wire into 10 equal pieces. Marta cut a 540-centimeter wire into 9 equal pieces. How much longer is one of Marta's wires than one of Tia's?

2. Jay needs 19 quarts more paint for the outside of his barn than for the inside. If he uses 107 quarts in all, how many gallons of paint will be used to paint the inside of the barn?

3. String A is 35 centimeters long. String B is 5 times as long as String A. Both are necessary to create a decorative bottle. Find the total length of string needed for 17 identical decorative bottles. Express your answer in meters.

4. A pineapple is 7 times as heavy as an orange. The pineapple also weighs 870 grams more than the orange.

   a. What is the total weight in grams for the pineapple and orange?

   b. Express the total weight of the pineapple and orange in kilograms.

Name _____ Date _____

1. Divide. Draw place value disks to show your thinking for (a) and (c). You may draw disks on your personal white board to solve the others if necessary.

a. 300 ÷ 10	b. 450 ÷ 10
c. 18,000 ÷ 100	d. 730,000 ÷ 100
e. 900,000 ÷ 1,000	f. 680,000 ÷ 1,000

2. Divide. The first one is done for you.

a. 18,000 ÷ 20 = 18,000 ÷ 10 ÷ 2 = 1,800 ÷ 2 = 900	b. 18,000 ÷ 200	c. 18,000 ÷ 2,000
d. 420,000 ÷ 60	e. 420,000 ÷ 600	f. 420,000 ÷ 6,000
g. 24,000 ÷ 30	h. 560,000 ÷ 700	i. 450,000 ÷ 9,000

3. A stadium holds 50,000 people. The stadium is divided into 250 different seating sections. How many seats are in each section?

4. Over the course of a year, a tractor trailer commutes 160,000 miles across America.

   a. Assuming a trucker changes his tires every 40,000 miles, and that he starts with a brand new set of tires, how many sets of tires will he use in a year?

   b. If the trucker changes the oil every 10,000 miles, and he starts the year with a fresh oil change, how many times will he change the oil in a year?

Name _____ Date _____

1. Estimate the quotient for the following problems. The first one is done for you.

a. 821 ÷ 41 ≈ 800 ÷ 40 = 20	b. 617 ÷ 23 ≈ _____ ÷ _____ = _____	c. 821 ÷ 39 ≈ _____ ÷ _____ = _____
d. 482 ÷ 52 ≈ _____ ÷ _____ = _____	e. 531 ÷ 48 ≈ _____ ÷ _____ = _____	f. 141 ÷ 73 ≈ _____ ÷ _____ = _____
g. 476 ÷ 81 ≈ _____ ÷ _____ = _____	h. 645 ÷ 69 ≈ _____ ÷ _____ = _____	i. 599 ÷ 99 ≈ _____ ÷ _____ = _____
j. 301 ÷ 26 ≈ _____ ÷ _____ = _____	k. 729 ÷ 81 ≈ _____ ÷ _____ = _____	l. 636 ÷ 25 ≈ _____ ÷ _____ = _____
m. 835 ÷ 89 ≈ _____ ÷ _____ = _____	n. 345 ÷ 72 ≈ _____ ÷ _____ = _____	o. 559 ÷ 11 ≈ _____ ÷ _____ = _____

2. Mrs. Johnson spent $611 buying lunch for 78 students. If all the lunches cost the same, about how much did she spend on each lunch?

3. An oil well produces 172 gallons of oil every day. A standard oil barrel holds 42 gallons of oil. About how many barrels of oil will the well produce in one day? Explain your thinking.

Name _____ Date _____

1. Estimate the quotients for the following problems. The first one is done for you.

a. 8,328 ÷ 41 ≈ 8,000 ÷ 40 = 200	b. 2,109 ÷ 23 ≈ _____ ÷ _____ = _____	c. 8,215 ÷ 38 ≈ _____ ÷ _____ = _____
d. 3,861 ÷ 59 ≈ _____ ÷ _____ = _____	e. 2,899 ÷ 66 ≈ _____ ÷ _____ = _____	f. 5,576 ÷ 92 ≈ _____ ÷ _____ = _____
g. 5,086 ÷ 73 ≈ _____ ÷ _____ = _____	h. 8,432 ÷ 81 ≈ _____ ÷ _____ = _____	i. 9,032 ÷ 89 ≈ _____ ÷ _____ = _____
j. 2,759 ÷ 48 ≈ _____ ÷ _____ = _____	k. 8,194 ÷ 91 ≈ _____ ÷ _____ = _____	l. 4,368 ÷ 63 ≈ _____ ÷ _____ = _____
m. 6,537 ÷ 74 ≈ _____ ÷ _____ = _____	n. 4,998 ÷ 48 ≈ _____ ÷ _____ = _____	o. 6,106 ÷ 25 ≈ _____ ÷ _____ = _____

2. 91 boxes of apples hold a total of 2,605 apples. Assuming each box has about the same number of apples, estimate the number of apples in each box.

3. A wild tiger can eat up to 55 pounds of meat in a day. About how many days would it take for a tiger to eat the following prey?

Prey	Weight of Prey	Number of Days
Eland Antelope	1,754 pounds	
Boar	661 pounds	
Chital Deer	183 pounds	
Water Buffalo	2,322 pounds	

Name ____ Date ______________________

1. Divide, and then check using multiplication. The first one is done for you.

   a. 71 ÷ 20

```
              3    R 11
  2   0 | 7   1
      -   6   0
          -----
          1   1
```

   Check:

   20 × 3 = 60
   60 + 11 = 71

   b. 90 ÷ 40

   c. 95 ÷ 60

   d. 280 ÷ 30

   e. 437 ÷ 60

   f. 346 ÷ 80

2. A number divided by 40 has a quotient of 6 with a remainder of 16. Find the number.

3. A shipment of 288 reams of paper was delivered. Each of the 30 classrooms received an equal share of the paper. Any extra reams of paper were stored. After the paper was distributed to the classrooms, how many reams of paper were stored?

4. How many groups of sixty are in two hundred forty-four?

Name _____ Date _____

1. Divide. Then, check with multiplication. The first one is done for you.

a. 72 ÷ 31

$$\begin{array}{r} 2\ \text{R}\ 10 \\ 31\overline{)\,72} \\ -\ 62 \\ \hline 10 \end{array}$$

Check:

$31 \times 2 = 62$

$62 + 10 = 72$

b. 89 ÷ 21

c. 94 ÷ 33

d. 67 ÷ 19

e. 79 ÷ 25

f. 83 ÷ 21

2. A 91 square foot bathroom has a length of 13 feet. What is the width of the bathroom?

3. While preparing for a morning conference, Principal Corsetti is laying out 8 dozen bagels on square plates. Each plate can hold 14 bagels.

   a. How many plates of bagels will Mr. Corsetti have?

   b. How many more bagels would be needed to fill the final plate with bagels?

Name _____ Date _____

1. Divide. Then, check using multiplication. The first one is done for you.

a. 129 ÷ 21

$$\begin{array}{r} 6\ \text{R}\ 3 \\ 21\overline{)\,129} \\ -\ 126 \\ \hline 3 \end{array}$$

Check:

$21 \times 6 = 126$

$126 + 3 = 129$

b. 158 ÷ 37

c. 261 ÷ 49

d. 574 ÷ 82

e. 464 ÷ 58

f. 640 ÷ 79

2. It takes Juwan exactly 35 minutes by car to get to his grandmother's. The nearest parking area is a 4-minute walk from her apartment. One week, he realized that he spent 5 hours and 12 minutes traveling to her apartment and then back home. How many round trips did he make to visit his grandmother?

3. How many eighty-fours are in 672?

Name _____ Date _____

1. Divide. Then, check using multiplication. The first one is done for you.

   a. 487 ÷ 21

$$\begin{array}{r} 2\ 3\ \text{R}\ 4 \\ 21\overline{)\,4\ 8\ 7} \\ -\ 4\ 2 \\ \hline 6\ 7 \\ -\ 6\ 3 \\ \hline 4 \end{array}$$

Check:

$21 \times 23 = 483$

$483 + 4 = 487$

   b. 485 ÷ 15

   c. 700 ÷ 21

   d. 399 ÷ 31

e. 820 ÷ 42

f. 908 ÷ 56

2. When dividing 878 by 31, a student finds a quotient of 28 with a remainder of 11. Check the student's work, and use the check to find the error in the solution.

3. A baker was going to arrange 432 desserts into rows of 28. The baker divides 432 by 28 and gets a quotient of 15 with remainder 12. Explain what the quotient and remainder represent.

Name _____ Date _____

1. Divide. Then, check using multiplication.

a. 9,962 ÷ 41

b. 1,495 ÷ 45

c. 6,691 ÷ 28

d. 2,625 ÷ 32

e. 2,409 ÷ 19

f. 5,821 ÷ 62

2. A political gathering in South America was attended by 7,910 people. Each of South America's 14 countries was equally represented. How many representatives attended from each country?

3. A candy company packages caramel into containers that hold 32 fluid ounces. In the last batch, 1,848 fluid ounces of caramel were made. How many containers were needed for this batch?

Name _____ Date _____

1. Divide. Show every other division sentence in two steps. The first two have been done for you.

a. 1.8 ÷ 6 = 0.3

b. 1.8 ÷ 60 = (1.8 ÷ 6) ÷ 10 = 0.3 ÷ 10 = 0.03

c. 2.4 ÷ 8 = _____

d. 2.4 ÷ 80 = _____

e. 14.6 ÷ 2 = _____

f. 14.6 ÷ 20 = _____

g. 0.8 ÷ 4 = _____

h. 80 ÷ 400 = _____

i. 0.56 ÷ 7 = _____

j. 0.56 ÷ 70 = _____

k. 9.45 ÷ 9 = _____

l. 9.45 ÷ 900 = _____

2. Use place value reasoning and the first quotient to compute the second quotient. Use place value to explain how you placed the decimal point.

   a. 65.6 ÷ 80 = 0.82

      65.6 ÷ 8 = _____

   b. 2.5 ÷ 50 = 0.05

      2.5 ÷ 5 = _____

   c. 19.2 ÷ 40 = 0.48

      19.2 ÷ 4 = _____

   d. 39.6 ÷ 6 = 6.6

      39.6 ÷ 60 = _____

3. Chris rode his bike along the same route every day for 60 days. He logged that he had gone exactly 127.8 miles.

   a. How many miles did he bike each day? Show your work to explain how you know.

   b. How many miles did he bike over the course of two weeks?

4. 2.1 liters of coffee were equally distributed to 30 cups. How many milliliters of coffee were in each cup?

Name _____ Date _____

1. Estimate the quotients.

   a. 3.53 ÷ 51 ≈

   b. 24.2 ÷ 42 ≈

   c. 9.13 ÷ 23 ≈

   d. 79.2 ÷ 39 ≈

   e. 7.19 ÷ 58 ≈

2. Estimate the quotient in (a). Use your estimated quotient to estimate (b) and (c).

   a. 9.13 ÷ 42 ≈

   b. 913 ÷ 42 ≈

   c. 91.3 ÷ 42 ≈

3. Mrs. Huynh bought a bag of 3 dozen toy animals as party favors for her son's birthday party. The bag of toy animals cost $28.97. Estimate the price of each toy animal.

4. Carter drank 15.75 gallons of water in 4 weeks. He drank the same amount of water each day.

   a. Estimate how many gallons he drank in one day.

   b. Estimate how many gallons he drank in one week.

   c. About how many days altogether will it take him to drink 20 gallons?

Name _____ Date _____

1. Create two whole number division problems that have a quotient of 9 and a remainder of 5. Justify which is greater using decimal division.

2. Divide. Then, check your work with multiplication.

   a. 75.9 ÷ 22

   b. 97.28 ÷ 19

   c. 77.14 ÷ 38

   d. 12.18 ÷ 29

3. Divide.

   a. 97.58 ÷ 34

   b. 55.35 ÷ 45

4. Use the equations on the left to solve the problems on the right. Explain how you decided where to place the decimal in the quotient.

   a. 520.3 ÷ 43 = 12.1 52.03 ÷ 43 = _____

   b. 19.08 ÷ 36 = 0.53 190.8 ÷ 36 = _____

5. You can look up information on the world's tallest buildings at http://www.infoplease.com/ipa/A0001338.html.

   a. The Aon Centre in Chicago, Illinois, is one of the world's tallest buildings. Built in 1973, it is 1,136 feet high and has 80 stories. If each story is of equal height, how tall is each story?

   b. Burj al Arab Hotel, another one of the world's tallest buildings, was finished in 1999. Located in Dubai, it is 1,053 feet high with 60 stories. If each floor is the same height, how much taller or shorter is each floor than the height of the floors in the Aon Center?

Name _____ Date _____

1. Divide. Check your work with multiplication.

   a. 7 ÷ 28

   b. 51 ÷ 25

   c. 6.5 ÷ 13

   d. 132.16 ÷ 16

   e. 561.68 ÷ 28

   f. 604.8 ÷ 36

2. In a science class, students water a plant with the same amount of water each day for 28 consecutive days. If the students use a total of 23.8 liters of water over the 28 days, how many liters of water did they use each day? How many milliliters did they use each day?

3. A seamstress has a piece of cloth that is 3 yards long. She cuts it into shorter lengths of 16 inches each. How many of the shorter pieces can she cut?

4. Jenny filled 12 pitchers with an equal amount of lemonade in each. The total amount of lemonade in the 12 pitchers was 41.4 liters. How many liters of lemonade would be in 7 pitchers?

Name _____ Date _____

1. Mr. Rice needs to replace the 166.25 ft of edging on the flower beds in his backyard. The edging is sold in lengths of 19 ft each. How many lengths of edging will Mr. Rice need to purchase?

2. Olivia is making granola bars. She will use 17.9 ounces of pistachios, 12.6 ounces of almonds, 12.5 ounces of walnuts, and 12.5 ounces of cashews. This amount makes 25 bars. How many ounces of nuts are in each granola bar?

3. Adam has 16.45 kg of flour, and he uses 6.4 kg to make hot cross buns. The remaining flour is exactly enough to make 15 batches of scones. How much flour, in kg, will be in each batch of scones?

4. There are 90 fifth-grade students going on a field trip. Each student gives the teacher $9.25 to cover admission to the theater and for lunch. Admission for all of the students will cost $315, and each student will get an equal amount to spend on lunch. How much will each fifth grader get to spend on lunch?

5. Ben is making math manipulatives to sell. He wants to make at least $450. Each manipulative costs $18 to make. He is selling them for $30 each. What is the minimum number he can sell to reach his goal?

Name _____ Date _____

Solve.

1. Michelle wants to save $150 for a trip to the Six Flags amusement park. If she saves $12 each week, how many weeks will it take her to save enough money for the trip?

2. Karen works for 85 hours throughout a two-week period. She earns $1,891.25 throughout this period. How much does Karen earn for 8 hours of work?

3. The area of a rectangle is 256.5 m^2. If the length is 18 m, what is the perimeter of the rectangle?

4. Tyler baked 702 cookies. He sold them in boxes of 18. After selling all of the boxes of cookies for the same amount each, he earned $136.50. What was the cost of one box of cookies?

5. A park is 4 times as long as it is wide. If the distance around the park is 12.5 kilometers, what is the area of the park?