Extra Practice 1

Lesson 1: Numbers to Thousandths and Beyond

1. Use a place-value chart to show each number.
    a) 3.4715   **b)** 0.003 025
    c) 1.250 43   **d)** 0.0053

2. Use the numbers in question 1.
    What is the value of the 3 in each number?

3. Write each number in expanded form.
    a) 2.000 081   **b)** 0.0435
    c) 0.000 935   **d)** 0.012 78

4. Write each number in standard form.
    a) 3 and 124 thousandths
    b) 15 and 6 thousandths
    c) 7 ten-thousandths
    d) 13 millionths
    e) 4 and 21 hundred-thousandths
    f) 368 ten thousandths

5. Write a number that has a 4 in:
    a) the tenths position
    b) the millionths position
    c) the thousandths position
    d) the hundred-thousandths position
    e) the ten-thousandths position
    f) the ones position

6. Write the number in each fact in as many different forms as you can.
    a) The diameter of a strand of sewing thread is about 0.030 48 cm.
    b) The mass of a fine grain of sand is about 0.000 67 g.

7. How are the values of the 5s in each number related?
    a) 5.005   **b)** 0.355   **c)** 0.500 53   **d)** 2.351 529

Extra Practice 2

Lesson 2: Estimating Products and Quotients

1. Estimate each product or quotient.
   Tell if your estimate is an overestimate or an underestimate.
   a) 6.23×5
   b) 4.8×7
   c) 10.678×9
   d) $21.73 \div 4$
   e) $29.311 \div 3$
   f) $97.113 \div 2$

2. **a)** Shawn and his brothers went to the movie theatre.
      One ticket cost $7.75.
      Estimate the cost of 3 tickets.
   b) Shawn paid $10.75, including tax, for 3 containers of popcorn.
      Estimate the cost of one container of popcorn, including tax.

3. Estimate the perimeter of a square with each side length.
   Tell if your estimate is an overestimate or an underestimate.
   How do you know?
   a) 3.2 cm
   b) 3.8 cm
   c) 5.4 cm

4. Estimate the side length of a square with each perimeter.
   a) 39.8 cm
   b) 20.6 cm
   c) 58.4 cm

5. It costs $17.85 per night to camp at Notikewin Provincial Park in Alberta.
   About how much will it cost to camp there for a week?

6. **a)** Is 7.26×4 greater than, or less than, 28?
      How do you know?
   b) Is $41.16 \div 7$ greater than, or less than, 6?
      How do you know?

7. Describe a situation where you might want to use an overestimate.
   Explain why.

Extra Practice 3

Lesson 3: Multiplying Decimals by a Whole Number

1. The decimal point is missing in each product.
    Use front-end estimation to place the decimal point.
    a) $12.306 \times 2 = 24612$
    b) $3.07 \times 6 = 1842$
    c) $4.009 \times 7 = 28063$
    d) $1.0604 \times 3 = 31812$
    e) $10.521 \times 8 = 84168$
    f) $9.081 \times 4 = 36324$

2. Estimate to choose the correct product for each multiplication question.

Question	Possible Products		
a) 15.39×5	7.695	76.95	769.5
b) 2.57×3	0.771	7.71	77.1
c) 124.21×4	4.9684	49.684	496.84

3. Multiply.
    a) 5.04×7 b) 6.384×2 c) 17.009×6
    d) $\$17.35 \times 8$ e) 1.257×3 f) 0.736×4

4. Four friends went to Reptile World in Drumheller, Alberta, for the day.
    The cost of an admission ticket, including tax, was $7.35.
    What was the total cost of their admission?

5. Frank saved $4.35 each week for 8 weeks.
    He wants to buy a pair of aluminum drumsticks that cost $35.65, including tax.
    a) Does Frank have enough money? How do you know?
    b) If your answer to part a is no, how much more money does Frank need?

6. The decimal point in some of these products is in the wrong place.
    Identify the mistakes, then write each product with the decimal point
    in the correct place.
    a) $3.984 \times 3 = 119.52$
    b) $73.26 \times 4 = 293.04$
    c) $3.001 \times 5 = 150.05$
    d) $1.08 \times 5 = 0.54$

Extra Practice 4

Lesson 4: Multiplying a Decimal Less than 1 by a Whole Number

1. Use Base Ten Blocks.
   Multiply.
   a) 0.43×5 **b)** 0.065×2 **c)** 0.24×3

2. Multiply.
   Record each product in the place-value chart.

Ones	Tenths	Hundredths	Thousandths	Ten-Thousandths
a)				
b)				
c)				
d)				
e)				
f)				

   a) 0.008×7 **b)** 0.041×4 **c)** 0.0209×5
   d) 0.184×6 **e)** 0.1258×9 **f)** 0.0491×3

3. Multiply.
   What patterns do you see?
   a) 0.8×4 **b)** 0.39×8 **c)** 0.027×6
       0.08×4 0.039×8 0.0027×6
       0.008×4 0.0039×8 $0.000\ 27 \times 6$

4. Leah cut a strip of leather into 7 equal lengths to make bookmarks.
   Each piece was 0.232 m long.
   a) How long was the strip of leather before Leah cut it?
   b) How many cuts did she make?

5. Multiply as you would whole numbers.
   Estimate to place the decimal point.
   a) 0.495×6 **b)** 0.0027×9
   c) 0.093×3 **d)** 0.74×7
   e) 0.0053×8 **f)** 0.089×5

Extra Practice 5

Lesson 5: Dividing Decimals by a Whole Number

1. Use Base Ten Blocks to divide.
    a) 2.55 ÷ 5   **b)** 3.63 ÷ 3   **c)** 1.56 ÷ 4

2. The decimal point is missing in each quotient.
    Use estimation to place the decimal point.
    a) 7.4 ÷ 4 = 185   **b)** 6.12 ÷ 3 = 204
    c) 2.936 ÷ 8 = 367   **d)** 14.85 ÷ 5 = 297
    e) 10.323 ÷ 9 = 1147   **f)** 50.72 ÷ 8 = 634

3. Estimate to choose the correct quotient for each division question.

Question	Possible Quotients		
a) 9.256 ÷ 8	1.157	11.57	115.7
b) 53.92 ÷ 4	0.1348	1.348	13.48
c) 8.244 ÷ 9	0.916	9.16	91.6

4. The perimeter of each square is given.
    Find the side length of the square.
    a) *P* = 4.28 m   **b)** *P* = 17.52 cm

5. Divide. Multiply to check your answers.
    a) 40.6 ÷ 5   **b)** 7.092 ÷ 3   **c)** 1.968 ÷ 6
    d) 7.284 ÷ 6   **e)** 20.328 ÷ 8   **f)** 59.04 ÷ 9

6. Adam jogged 1.62 km in 9 min.
    Cecilia jogged 1.12 km in 7 min.
    Who jogged farther in 1 min?

7. Cito paid $13.75 to rent a bicycle for 5 h.
    His friend Alicia paid $2.95 each hour to rent
    a bicycle at a different location for 5 h.
    Who paid the lesser amount?

Extra Practice 6

Lesson 6: Dividing Decimals

1. Estimate to choose the correct quotient for each division question.

Question	Possible Quotients		
a) 3.16 ÷ 4	0.79	7.9	79
b) 8.64 ÷ 6	0.144	1.44	14.4
c) 89.2 ÷ 4	0.223	2.23	22.3

2. Divide.
   Estimate to place the decimal point.
   a) 3.589 ÷ 2   **b)** 18.2 ÷ 4   **c)** 2.768 ÷ 5
   d) 14.07 ÷ 5   **e)** 49.77 ÷ 2   **f)** 4.592 ÷ 4

3. Divide. Write each quotient to the same number of
   decimal places as there are in the dividend.
   a) 3.189 ÷ 2   **b)** 5.1 ÷ 9   **c)** $2.05 ÷ 2
   d) 27.3 ÷ 4   **e)** 7.66 ÷ 3   **f)** 1.3 ÷ 6

4. Lissa divided a 1.89-L bottle of cranberry juice
   equally among 6 glasses. How much juice is in each glass?

5. Three friends take a taxi home from the baseball game.
   The taxi ride was $35.80. They want to share the cost equally.
   a) How much should each person pay?
   b) Is your answer to part a exact or approximate? Explain.
   c) Is it possible to share the cost equally? Explain.

6. Check each division below.
   For each incorrect quotient, explain the error,
   then write the correct quotient.
   a) 1.76 ÷ 4 = 0.44
   b) $10.88 ÷ 5 = $2.176
   c) 18.46 L ÷ 3 = 6.153 L
   d) 9.544 ÷ 4 = 23.86

Extra Practice 7

Lesson 7: Dividing a Decimal Less than 1 by a Whole Number

1. Write the place value to make each statement true.
   a) 12 hundredths ÷ 4 = 3 _____
   b) 42 thousandths ÷ 6 = 7 _____
   c) 49 millionths ÷ 7 = 7 _____
   d) 264 ten-thousandths ÷ 2 = 132 _____

2. Divide.
   Record each quotient in the place-value chart.

Ones	Tenths	Hundredths	Thousandths	Ten-Thousandths
a)				
b)				
c)				
d)				
e)				
f)				

   a) 0.32 ÷ 4   b) 0.036 ÷ 6   c) 0.014 ÷ 7
   d) 0.056 ÷ 8   e) 0.81 ÷ 9   f) 0.0035 ÷ 5

3. Find each quotient.
   What patterns do you see?
   a) 0.4 ÷ 2   b) 0.32 ÷ 8   c) 0.075 ÷ 5
      0.04 ÷ 2   0.032 ÷ 8   0.0075 ÷ 5
      0.004 ÷ 2   0.0032 ÷ 8   0.000 75 ÷ 5

4. Marco has a baguette.
   The baguette has length 0.486 m.
   Suppose he cuts the baguette into 6 equal lengths.
   What is the length of each piece?

5. A student said that since 48 ÷ 4 = 12, then 0.48 ÷ 4 = 1200.
   Is the student's reasoning correct? Explain.

6. A student divided 0.843 by 3 and got 2.81.
   a) Without dividing, how do you know the answer is incorrect?
   b) Where do you think the student went wrong?
   c) What is the correct answer? How can you check?