Name:_____ Date: _____

3.1 Fractions to Decimals

1. a) Write each fraction as a decimal.

   i) $\frac{6}{8}$ ii) $\frac{1}{3}$ ii) $\frac{3}{5}$ iv) $\frac{7}{8}$ v) $\frac{6}{7}$

   b) Identify the decimals in part A as terminating or repeating.

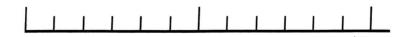2. Write each decimal as a fraction in simplest form.

   a) 0.02   b) 0.625   c) $0.8\overline{1}$ d) $0.\overline{063}$

3. For each fraction, write an equivalent fraction with denominator 10, 100, or 1000. Then, write the fraction as a decimal.

   a) $\frac{4}{5}$ b) $\frac{3}{50}$ c) $\frac{7}{20}$ d) $\frac{19}{200}$

3.2 Comparing and Ordering Fractions and Decimals

4. Order these fractions on the line.

   $\frac{1}{6}, \frac{8}{6}, \frac{3}{6}, 1\frac{1}{6}, \frac{6}{6}$

5. Order each set of numbers from least to greatest.

a) $3.75, 3\frac{1}{6}, \frac{14}{4}$

b) $\frac{21}{6}, 2\frac{6}{18}, 2\frac{2}{3}$

_____

_____

6. Several students purchased ribbon for their craft projects.

Student Name	Andrea	Jocelyn	Cam	Jesse
Ribbon purchased (m)	$1\frac{5}{8}$	1.6	$\frac{19}{12}$	$1\frac{2}{3}$

a) Use a number line to order the ribbon purchased from greatest to least.

b) Who purchased the most ribbon?

c) Who purchased the least amount of ribbon?

Lesson 3.3: Adding and Subtracting Decimals

1. Use front-end estimation to estimate each sum or difference.
   a) 9.043 + 0.9 + 1.15   b) 2.09 + 4.6 + 1.8
   c) 9.6 - 7.4   d) 50.4 - 5.04

2. Add or subtract. Use estimation to check the answers are reasonable.
   a) 7.56 + 0.07 + 122.7   b) 7.85 - 6.93
   c) 2.2 - 1.68   d) 83.07 + 0.42 + 7.7

3. Althea bought 3.6 kg of beef, 1.7 kg of cheese, 3 kg of fish and 2.28 kg of rice.
   What was the total mass she had to carry?
   Estimate to check your answer is reasonable.

4. The Andersons can take one of two routes to their cabin on the lake.
   If they take the highway route, the distance from their home to the cabin
   is 156.7 km. If they take the more scenic route, the distance is 189.4 km.
   How much longer is the scenic route than the highway route?

5. One summer, the average price for a litre of gasoline in Edmonton was $1.147
   while the average price for a litre of gasoline in Victoria was $1.234.
   How much more did a litre of gasoline cost in Victoria than in Edmonton that
   summer? Write your answer to the nearest cent.

6. Find two numbers with a sum of 254.791.

7. A student added 2.35 + 4.256 and got the sum 4.491.
   a) What mistake did the student make?
   b) What is the correct answer?

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3.4 Multiplying Decimals

1) 8.2 x 7.3

Est.

Evaluate

2) 9.7 x 5.1

Est.

Evaluate

3) 2.4 x 2.6

Est.

Evaluate

4) 7.9 x 6.6

Est.

Evaluate

5) 8.73 x 1.56

Est.

Evaluate

6) 4.94 x 4.65

Est.

Evaluate

7) 5.456 + 6.75

Est.

Evaluate

8) 16.242 – 12.763

Est.

Evaluate

9) A skating rink is rectangular. Its dimensions are 19.8 m by 46.3 m. What is the area of the rink? Estimate to check your answer is reasonable.

10) Order the fractions from least to greatest. Use whatever strategy you prefer. Please show your thinking.

1/2,   1/10,   1/5,   7/10   _____

Name: _____   Date: _____

3.5 Dividing Decimals

$0.58\overline{)0.5568}$ $0.2\overline{)0.12}$ $0.7\overline{)0.1995}$ $1.5\overline{)1.2}$

$0.1\overline{)0.0805}$ $0.6\overline{)1.452}$ $0.5\overline{)0.05}$ $3.64\overline{)28.5376}$

Cameron has a board 3.8 m long. He wants to make shelves for his room. Each shelf is to be 0.6 m long.

a) How many shelves will Cameron get from this board?

b) He needs 4 shelves. How much board is left over?

Anita bought 5.7 m of curtain material. It cost $170.94. What is the cost of 1 m of material?

The area of the top of a rectangular picnic table is 1.26 m². The width of the tabletop is 0.7m. What is its length?

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3.6 Order of Operations with Decimals

1. Evaluate.

a) $2.8 + 3.9 - 4.2$

b) $78.9 - 9.6 \div 0.2$

c) $57.2 + 28.1 \times 4$

2. Evaluate.

a) $(23.92 - 16.46) \times 1.8$

b) $(32.7 + 6.4) \div 0.4$

c) $6.8 \div (3.2 - 2.4)$

3. Evaluate.

a) $41.6 - 3.4 \times (7.8 + 0.9)$

b) $41.6 - 3.4 \times 7.8 + 0.9$

c) $(41.6 - 3.4) \times (7.8 + 0.9)$

4. What do you notice about the expressions and answers in question 3? Explain.

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3.7 Relating Fractions, Percents, and Decimals

1. Write each fraction as a decimal and a percent.

   a) $\dfrac{21}{35}$ b) $\dfrac{14}{20}$ c) $\dfrac{28}{56}$ d) $\dfrac{12}{16}$ e) $\dfrac{18}{200}$

2. Ruth's test scores were: $\dfrac{17}{20}, \dfrac{21}{28}$, and $\dfrac{40}{50}$.

   Write each test score as a percent. Order the test scores from greatest to least.
   Which was Ruth's best test? How do you know?

3. Write each percent as a fraction and a decimal.
   a) 18%   b) 37%   c) 86%

4. In 5 min, Benjamin completed 27 of 30 multiple-choice questions.
   Madison completed 83% of the questions.
   Who completed more questions? How do you know?

5. Barney created a design on a grid.

   He coloured $\dfrac{1}{8}$ of the grid red. He coloured 0.375 of the grid green.

   He coloured 40% of the grid blue. He coloured the rest of the grid purple.
   What percent of the grid is purple? How do you know?

Name: _____   Date: _____

3.8 Solving Percent Problems

1. Calculate.
   a) 10% of 78   b) 15% of 60   c) 20% of 120

   d) 65% of 84   e) 87% of 118   f) 37% of 215

2. Ms. Leitch has 27 students in her class.
   About 30% of the students in Ms. Leitch's class enjoy playing soccer.
   a) About how many students enjoy playing soccer?
   b) The school has a total of 539 students.
      Assume 30% of all students in the school enjoy playing soccer.
      About what percent of the school's population enjoys playing soccer?

3. The regular price of a skateboard is $74.99.
   Find the sale price before taxes when the skateboard is on sale for:
   a) 30% off   b) 25% off
   c) 60% off   d) 50% off

4. Find the tip left by each customer at a restaurant.
   a) Wally: 15% of $25.73
   b) Priya: 25% of $19.48
   c) Alyssa: 10% of $48.22

5. The Goods and Services tax (GST) is currently 6%.
   For each item below:
   i) Find the GST.
   ii) Find the cost of the item including GST.
      a) package of 5 mechanical pencils: $4.49
      b) backpack: $29.99
      c) box of golf balls: $32.49