Date: _____

2.2 Problem Solving With Rational Numbers in Decimal Form

MathLinks 9, pages 55–62

Key Ideas Review

Circle the correct response to complete each statement.

1. One way to model the subtraction of rational numbers is by (adding/subtracting) the opposite on a number line.

2. The product or quotient of two rational numbers with different signs is (positive/negative).

3. The product or quotient of two rational numbers with the same sign is (positive/negative).

4. The order of operations for calculations involving rational numbers is:

a) Perform operations inside parentheses (first/last).

b) Divide and (subtract/multiply) in order from left to right.

c) Add and (subtract/multiply) in order from left to right.

Check Your Understanding

5. Estimate and calculate. Show your work.

a) $3.75 - 1.25$

b) $-7.05 - 10.82$

c) $-4.51 + (-9.33)$

d) $8.04 + (-1.25)$

6. Estimate and calculate. Show your work.

a) $-6.2 \times (-4.3)$

b) $16.12 \div (-3.1)$

c) $-3.9(8.9)$

7. Calculate. Express your answer to the nearest thousandth, if necessary. Show your work.

a) $-3.2(7.8)$

b) $-6.7 \div (-1.3)$

c) $-5.7 \div 0.34$

Date: _____

8. Calculate. Show your work.

a) $-3.2(3.6 - 7.1)$

b) $-1.8 \times 6.1 + 3.8(-0.9)$

c) $-2.2[4.8 - (-1.7)]$

d) $9.7 + 4.8 - 19.24 \times 5.2$

e) $(7.04 - 9.26)(9.13 - 4.78)$

f) $8.07 + 3.1[9.5 - (-8.7)]$

9. Samir owns some company shares. The value of each share rose and dropped over a week, as shown in the table. What was the total change in value of each share after the week? Show your work.

Mon	Tues	Wed	Thurs	Fri
+0.21	−0.03	−0.11	−0.09	+0.02

10. Complete each statement.

a) $-12.5 - \square = -5.6$

b) $2.7 + \square = -7.1$

c) $-8.58 \div \square = 3.9$

d) $-3.2 \times \square = 24$

11. Determine the average of each set of numbers. Express your answer to the nearest hundredth, if necessary.

a) −3.6, 0.9, −4.5, −2.7, −0.5, 3.6, 1.7

b) 9.6, −8.9, −12.6, −2.7, −7.5, 23.6

12. The average high temperature in January in Winnipeg is −12.7 °C. In Victoria, it is 6.9 °C.

a) Write an expression to represent the difference between these temperatures.

b) Calculate the answer.

13. A submarine was floating on the surface of the water. It then descended at a rate of 0.5 m/s for 3 min. Then, it ascended at a rate of 0.7 m/s for 1 min and 15 s.

a) Write an expression to determine the depth of the submarine after these two moves.

b) Calculate the answer. Show your work.