

Name: \_\_\_\_\_

## Math 90

### Rational Numbers Review

1. Write each number as a rational number in simplest fraction form.

a)  $1\frac{7}{9}$

b)  $-3$

c)  $-0.725$

d)  $0.\overline{36}$

(4)

2. Place the numbers below on the number line.

a)  $\frac{3}{11}$

b)  $\frac{-7}{3}$

c)  $\frac{-4}{9}$

d)  $\frac{12}{7}$

(4)



3. Use the symbols  $<$ ,  $>$ , or  $=$  to make each statement true.

a)  $\frac{3}{8}$        $\frac{4}{7}$

b)  $\frac{-5}{13}$        $\frac{-4}{11}$

(2)

4. List the integers that are between  $\frac{-13}{4}$  and  $\frac{8}{3}$ . (1)

5. Give an example of a rational number in fraction form between  $\frac{11}{13}$  and  $\frac{12}{13}$ . (1)

6. On a cold winter Monday in Calgary, the temperature reached a high of  $-12.5^{\circ}\text{C}$ . On Tuesday, the high went up by  $4.3^{\circ}\text{C}$ . On Wednesday, it went down  $11.7^{\circ}\text{C}$ . On Thursday, it went up by  $9.1^{\circ}\text{C}$ . On Friday, it cooled down by  $3.9^{\circ}\text{C}$ . What was the high temperature on Friday? (1)

7. A submarine was cruising at a depth of 172 m. It then started to rise toward the surface at a rate of 0.08 m/s for 15 min. (Show your work)

a) Determine the depth of the submarine after 15 min.

(2)

b) After the submarine has reached its depth in part **a**), it slows down its ascent to 0.05 m/s, how long will it take to reach the surface?

(2)

8. Determine the mean of the numbers listed below. (Show your work)

0.8, -1.5, 3.6, 4.7, -2.4

(1)

9. Combined, the Pacific Ocean, the Atlantic Ocean, and the Indian Ocean cover about  $\frac{7}{10}$  of the surface of the earth. The Pacific Ocean alone covers approximately  $\frac{1}{3}$  and the Atlantic Ocean alone covers approximately  $\frac{1}{5}$ . What fraction does the Indian Ocean cover?

(Show your work)

(2)

10. Cory divided half a watermelon equally between himself and seven friends. What fraction of a watermelon did each person receive? (Show your work)

(2)

11. One morning at school,  $\frac{9}{10}$  of the students in a class arrived before the bell rang and  $\frac{1}{15}$  arrived after the bell rang. What fraction of the class was present that day?

(Show your work)

(2)

12. Of the 48 cars in a parking lot,  $\frac{2}{3}$  have two doors. If  $\frac{3}{4}$  of those two door cars are hybrids, how many of the cars in the lot are two door hybrids? (Show your work)

(2)

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Math 90  
Rational Numbers – Estimation Review  
No Calculators

1. Estimate the following results. (Do NOT calculate the answer!!!) (Show your work)

a)  $0.8 + 1.479 + 3.64 + 2.27$

b)  $41.52 - 18.83 - 7.0295$

(6)

c)  $368.129 \times 74.632$

d)  $476.94536 \div 7.894$

e)  $\frac{18}{5} + \frac{23}{7} + \frac{10}{9}$

f)  $\frac{42}{5} \times \frac{19}{8}$