NAME DATE PERIOD

Assessment

Rational Numbers: End-of-Unit Assessment

Do not use a calculator.

1. These four numbers are plotted on a number line: $-\frac{2}{3}, \frac{5}{8}, -\frac{3}{5}, -\frac{1}{2}$

   Which is the correct ordering on the number line, from left to right?

   A. $-\frac{1}{2}, -\frac{3}{5}, -\frac{2}{3}, \frac{5}{8}$

   B. $-\frac{1}{2}, -\frac{3}{5}, \frac{5}{8}, -\frac{2}{3}$

   C. $-\frac{2}{3}, -\frac{3}{5}, -\frac{1}{2}, \frac{5}{8}$

   D. $-\frac{3}{5}, -\frac{2}{3}, -\frac{1}{2}, \frac{5}{8}$

2. Diego's dog weighs more than 10 kilograms and less than 15 kilograms. Select **all** the inequalities that *must* be true if w is the weight of Diego's dog in kilograms.

   A. $w > 10$

   B. $w < 10$

   C. $w > 11$

   D. $w < 11$

   E. $w > 15$

   F. $w < 15$

NAME DATE PERIOD

3. Select **all** the numbers that are common multiples of 4 and 6.

A. 1

B. 2

C. 10

D. 12

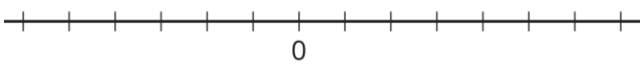
E. 24

F. 40

G. 60

4. Given $x = -2$, mark and place these expressions on the same number line.

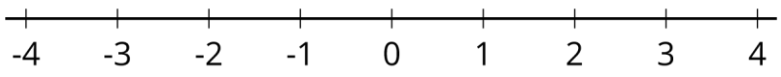
$$x, -x, |-1.5|, -4, |5|, |-6|$$



5. a. Which temperature is warmer, -2 degrees Celsius, or -5 degrees Celsius?

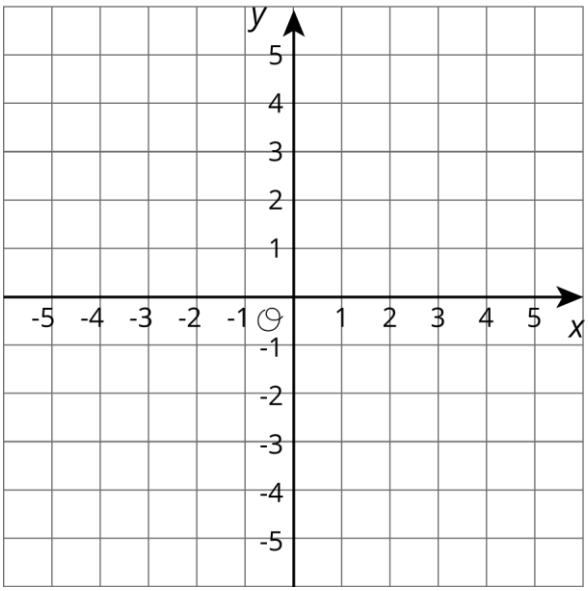
b. Write an inequality to express the relationship between -2 and -5.

c. On this number line, graph all the temperatures that are warmer than -2 degrees Celsius.



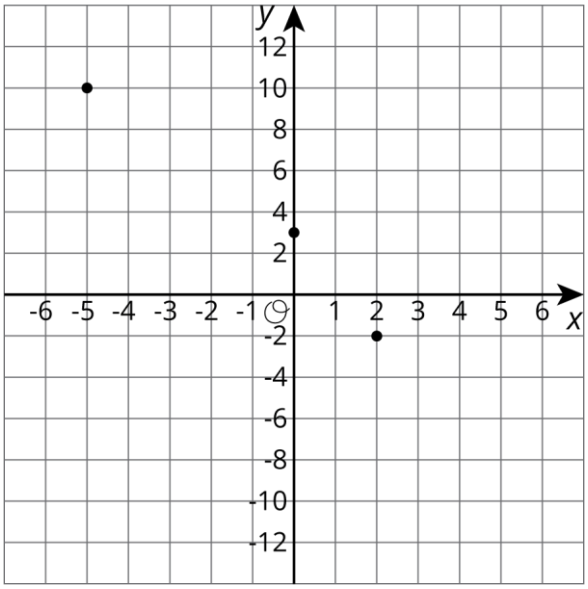
NAME DATE PERIOD

6. Draw polygon ABCDEF in this coordinate plane, given its vertices $A = (-2, -3)$, $B = (0, -3)$, $C = (0,1)$, $D = (3,1)$, $E = (3,3)$, $F = (-2,3)$.



NAME DATE PERIOD

7. Starting at 7:00 a.m., Lin spent a day hiking through a canyon. This graph shows her elevation (in meters) at some different times. Negative values of x represent times earlier than noon, and positive values of x represent times later than noon.



a. What was Lin's elevation at noon? Explain how you know.

b. At 10:00 a.m., Lin's elevation was 7 meters. Add this point to the graph.

c. At 1:00 p.m., Lin was at sea level. Add this point to the graph.

d. Did Lin's elevation increase or decrease between 7:00 a.m. and 2:00 p.m.? Explain how you know.

e. Lin climbed downward from 2:00 p.m. to 3:00 p.m. Add a point to the graph that shows her possible elevation at 3:00 p.m. Explain your reasoning.

NAME DATE PERIOD