

---

 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

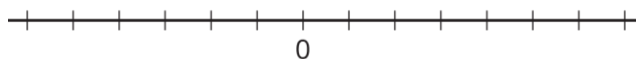
PERIOD

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

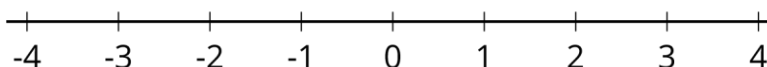
- A. 1
- B. 2
- C. 10
- D. 12
- E. 24
- F. 40
- G. 60

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.



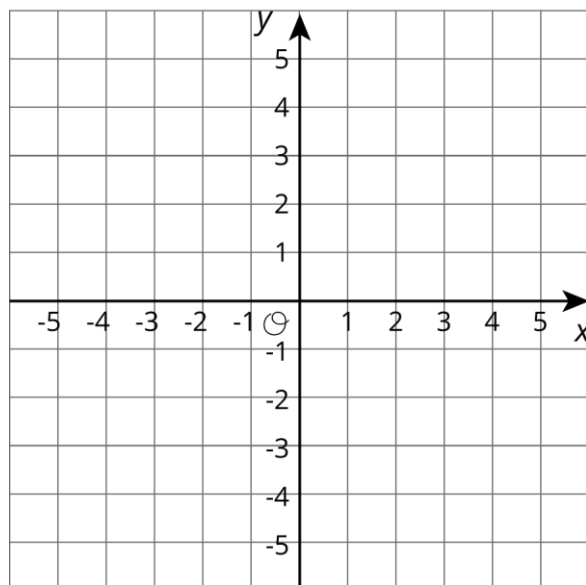
---

 NAME \_\_\_\_\_

DATE \_\_\_\_\_

PERIOD \_\_\_\_\_

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



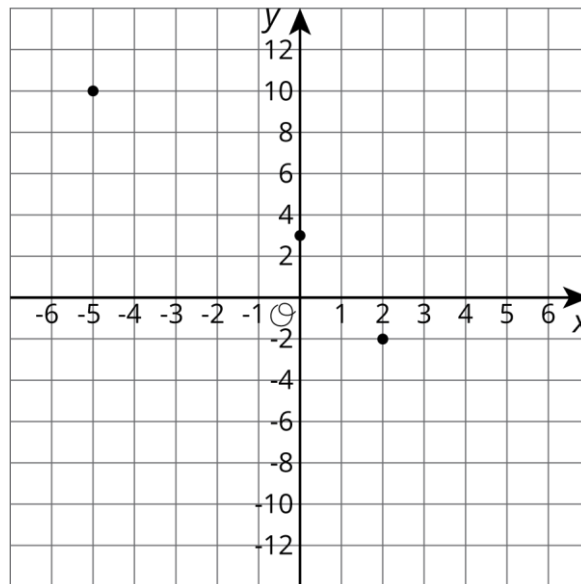
---

 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.



- What was Lin's elevation at noon? Explain how you know.
  - At 10:00 a.m., Lin's elevation was 7 meters. Add this point to the graph.
  - At 1:00 p.m., Lin was at sea level. Add this point to the graph.
  - Did Lin's elevation increase or decrease between 7:00 a.m. and 2:00 p.m.? Explain how you know.
  - 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

IM 6–8 Math was originally developed by Open Up Resources and authored by Illustrative Mathematics, and is copyright 2017-2019 by Open Up Resources. It is licensed under the Creative Commons Attribution 4.0 International License (CC BY 4.0). OUR's 6–8 Math Curriculum is available at <https://openupresources.org/math-curriculum/>. Adaptations and updates to IM 6–8 Math are copyright 2019 by Illustrative Mathematics, and are licensed under the Creative Commons Attribution 4.0 International License (CC BY 4.0). Adaptations to add additional English language learner supports are copyright 2019 by Open Up Resources, and are licensed under the Creative Commons Attribution 4.0 International License (CC BY 4.0). The Illustrative Mathematics name and logo are not subject to the Creative Commons license and may not be used without the prior and express written consent of Illustrative Mathematics.