Name_____ Date_____ Period_____

LESSON 7-2 · SESSION 1 · PRACTICE · FORM B

Rational Numbers on a Number Line

Learning target – I can plot a rational number and its opposite on a number line. · 6.NS.C.6c

REMEMBER

- A **rational number** can be written as a fraction of two integers: 3/4, −2.5 = −5/2, 7 = 7/1.
- To plot one, mark the integers, then split each gap into **equal parts** (halves, fourths, tenths).
- Negative numbers sit **left of 0**, or **below 0** on a vertical number line.

WORKED EXAMPLE

Plot 1.5 and −3.5 on a number line.

Step 1 Mark the integers from −4 to 4.

Step 2 Split each gap into halves.

Step 3 1.5 is halfway between 1 and 2.
−3.5 is halfway between −4 and −3.

Answer **1.5 is right of 0; −3.5 is left of 0**

WORDS **rational number** *(número racional)* · **integer** *(número entero)* · **number line** *(recta numérica)*

PRACTICE

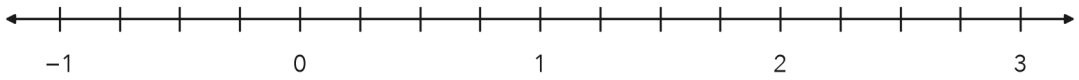
show your work · label units

1. Name the two integers each number is between.

a. −7/2 _____ **b.** 0.4 _____

c. −9/4 _____ **d.** −3.7 _____

2. **Garden Log.** Ms. Patel's class measures from the soil surface (0): sunflower 2.5 m up, carrot root 0.5 m down, bean sprout 1.25 m up, tulip bulb 0.3 m down.

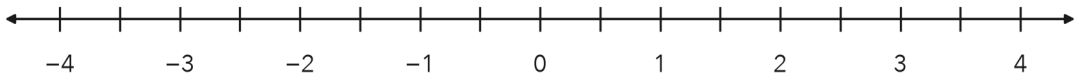


a. Write a rational number for each: sunflower ___ carrot ___ bean ___ tulip ___

b. Plot and label all four on the number line.

3. **Lab Thermometer.** A lab thermometer read −3.5 degrees at 6 a.m. and 3.5 degrees at noon. Plot both readings. How far is each reading from 0?

Hint *Count the halves from 0 to each point.*



Answer_____ degrees

4. Mixing Bowl. A cook added 7/4 cups of broth to a bowl, then removed 7/4 cups. Write the removal as a rational number in decimal form.

Hint *Removing makes the number negative. 7/4 = 1 3/4.*

Show your work.

Answer_____ cups

5. Rational Claim. Jalen says −4 is not a rational number because it is not written as a fraction. Write −4 as a fraction with a denominator of 1. Is Jalen right?

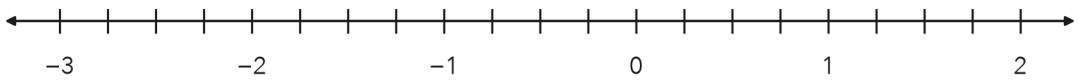
Hint *Any integer can be divided by 1.*

Show your work.

Fraction_____

6. Three Marks. A number strip shows the marks −9/4, 1.6 and −0.35. Plot all three. Which mark is closest to 0?

Hint *Write −9/4 as a decimal first: −2.25.*



Closest to 0_____

7. Pool Depths. A pool's surface is 0. A float sits 0.6 m above the surface and a drain sits at −2.1 m. How many meters farther from the surface is the drain than the float?

Hint *Find each distance from 0, then subtract.*

Show your work.

Answer_____ m

8. Ledge and Cave. A rock ledge is 8.5 meters above the sea surface. A cave floor sits at the opposite value.

a. Write the number for the cave floor.

_____ m

b. Between which two integers is the cave floor? _____

Show your work.

FIND THE ERROR

explain the mistake, then fix it

9. Jalen's Work. To plot −3.6, Jalen counted six tenths to the RIGHT of −3 and put his point between −3 and −2. Explain his mistake. Then name the two integers −3.6 is between.

_____

_____

_____

TEST PRACTICE

choose the best answer

10. On a number line, −1.5 sits between –

A −1 and 0 **B** 1 and 2 **C** −2 and −1 **D** −1.5 and −1

11. Which number is farthest right on a number line?

A −0.5 **B** −3 **C** 0.25 **D** −0.75

SELF-CHECK CODE *find your answer · copy its letter into that problem's box · spell a math word*

0.35 J	3.5 P	1.75 Q	−1.75 O	1.5 T	8.5 X	−8.5 S	−4/1 I	−0.35 N	−3.5 Z

#3	#4	#5	#6	#7	#8a

CHECK YOURSELF	☐ I can do this on my own	☐ I need a little help	☐ I have a question about #___