Name_____ Date_____ Period_____

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

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

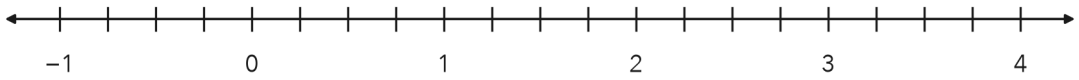
show your work · label units

1. Name the two integers each number is between.

a. −9/2 _____ **b.** 0.75 _____

c. −11/4 _____ **d.** −2.4 _____

2. **Garden Log.** A garden log measures from the soil surface (0): sunflower 3.5 m up, carrot root 0.75 m down, bean sprout 0.5 m up, tulip bulb 0.2 m down.

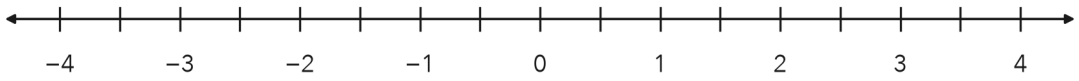


a. Write a rational number for each: sunflower ___ carrot ___ bean ___ tulip ___

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

3. **Lab Thermometer.** A lab thermometer read −2.5 degrees at 6 a.m. and 2.5 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 5/4 cups of broth to a bowl, then removed 5/4 cups. Write the removal as a rational number in decimal form.

Hint *Removing makes the number negative. 5/4 = 1 1/4.*

Show your work.

Answer_____ cups

5. **Rational Claim.** Lena says 7 is not a rational number because it is not written as a fraction. Write 7 as a fraction with a denominator of 1. Is Lena right?

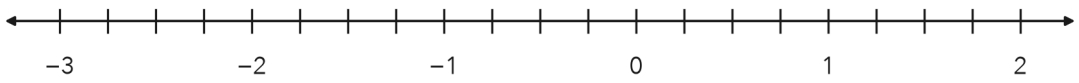
Hint *Any integer can be divided by 1.*

Show your work.

Fraction_____

6. **Three Marks.** A number strip shows the marks −11/4, 1.3 and −0.45. Plot all three. Which mark is closest to 0?

Hint *Write −11/4 as a decimal first: −2.75.*



Closest to 0_____

7. **Pool Depths.** A pool's surface is 0. A float sits 0.4 m above the surface and a drain sits at −1.6 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 12.5 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. **Rafael's Work.** To plot −3.4, Rafael counted four tenths to the RIGHT of −3 and put his point between −3 and −2. Explain his mistake. Then name the two integers −3.4 is between.

_____

_____

_____

TEST PRACTICE

choose the best answer

10. On a number line, −2.5 sits between –

A −2 and −1 **B** −3 and −2 **C** 2 and 3 **D** −2.5 and −2

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

A −4.5 **B** −1.5 **C** 0 **D** 2.5

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

2.5 N	−12.5 R	7/1 M	1.25 Q	1.2 E	12.5 X	−0.45 B	−2.5 Z	−1.25 U	0.45 J

#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 #___