

Student Self-Assessment

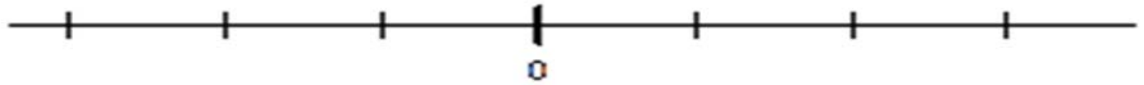
Learning Outcomes		Practice Questions	I get all of it	I get it, but made some errors	I get only some of it	I don't get it at all
A3	Demonstrate an understanding of rational numbers by: comparing and ordering rational numbers and solving problems that involve arithmetic operations on rational numbers.	#1–6				
A4	Explain and apply the order of operations with and without technology.	#7–9				

What do you need to work on? What is your plan to ensure you will be successful come test day?

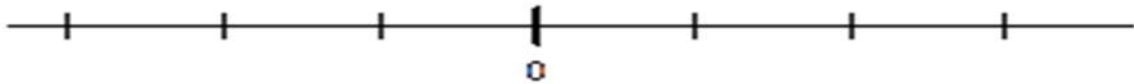
[illegible]

1. Order these rational numbers from **least to greatest**, and place them on a number line.

$$-\frac{7}{3} \quad 1.7 \quad \frac{16}{9} \quad -0.45 \quad \frac{1}{3} \quad -2.1$$



2. a) Identify **two rational numbers** that are between -1.2 and $-1\frac{3}{5}$, and place them on a number line.



- b) Why are -1.2 and $-1\frac{3}{5}$ **rational** numbers?

3. Find the sum or difference. Please show all work.

a) $\frac{4}{5} + \left(-\frac{3}{10}\right)$

b) $-7.8 + 0.4$

c) $-7.4 - (-6.1)$

d) $\left(-4\frac{2}{3}\right) - 1\frac{1}{2}$

4. Find the product or quotient. Please show all work.

a) $\left(-4\frac{2}{3}\right) \times 1\frac{5}{7}$

b) $8.7 \times (-2.1)$

c) $(-3.2) \div (-0.5)$

d) $\left(-2\frac{3}{4}\right) \div \frac{1}{3}$

5. A baker has a cupcake recipe that calls for $2\frac{1}{4}$ cups of flour. He needs to **triple** the recipe. How many cups of flour will he need? Show your work clearly.
6. A carpenter has $16\frac{1}{2}$ feet of baseboard material. If he cuts off 5 pieces, each with length $3\frac{1}{4}$ feet, how much material is left? Show your work clearly.
7. Evaluate each expression. Please show all work.
- a) $-3.1 + 4.5 \times (-2.9) - 7.2 \div (-3)$
- b) $\frac{1}{2} + \left(-\frac{3}{4}\right) \div \left(-\frac{1}{4}\right)$

8. Both Amanda and Emilee evaluated the expression below. Amanda's answer was 40.8 and Emilee's answer was 54.6. Who is correct? Please show your work.

$$2.3 + (-11.2) \div (-0.2) - 3.7$$

9. Indicate where the student first went wrong for each question below. Show the correct solution that leads to a correct answer. Please show all of your work clearly.

a)	$(-3.7) \times (-2.8 + 1.5) - 4.8 \div (-1.2)$
	$= (-3.7) \times (1.3) - 4.8 \div (-1.2)$
	$= -4.81 - 4.8 \div (-1.2)$
	$= -9.61 \div (-1.2)$
	$= 8.008\bar{3}$
b)	$-\frac{3}{8} - \frac{4}{5} \times \frac{3}{10} \div \left(-\frac{4}{5}\right)$
	$= -\frac{15}{40} - \frac{32}{40} \times \frac{3}{10} \div \left(-\frac{4}{5}\right)$
	$= -\frac{47}{40} \times \frac{3}{10} \div \left(-\frac{4}{5}\right)$
	$= -\frac{141}{400} \div \left(-\frac{4}{5}\right)$
	$= -\frac{141}{400} \times \left(-\frac{5}{4}\right)$
	$= \frac{(-141) \times (-5)}{400 \times 4}$
	$= \frac{705}{1600}$

Answers to Chapter 3 Practice Test

1. $-\frac{7}{3}, -2.1, -0.45, \frac{1}{3}, 1.7, \frac{16}{9}$
2. a) Since $-1\frac{3}{5} = -1\frac{6}{10} = -1.6$, any two rational numbers between -1.6 and -1.2 would be correct. For example, -1.5 and -1.4 .
b) They can both be written as the ratio of two numbers (i.e. as fractions):
 $-1.2 = -\frac{12}{10}$ and $-1\frac{3}{5} = -\frac{8}{5}$
3. a) $\frac{1}{2}$ b) -7.4 c) -1.3 d) $-6\frac{1}{6}$
4. a) -8 b) -18.27 c) 6.4 d) $-8\frac{1}{4}$
5. $6\frac{3}{4}$ cups of flour
6. $\frac{1}{4}$ ft
7. a) -13.75 b) $3\frac{1}{2}$
8. Emilee is correct.
9. a) The sign of the answer to the first step, $(-2.8 + 1.5)$, is incorrect. Later on, the student subtracts before doing the division first. Correct answer: 8.81.
b) The student subtracts before doing the multiplication first. Correct answer: $-\frac{3}{40}$