Lesson 7: Ordering Integers and Other Rational Numbers

Classwork

Exercises #1-5

For each problem, order the rational numbers from least to greatest by first reading the problem, then drawing a number line diagram, and finally, explaining your answer.

1. Mrs. Rodriguez is a teacher at Westbury Middle School. She gives bonus points on tests for outstanding written answers and deducts points for answers that are not written correctly. She uses rational numbers to represent the points. She wrote the following on students' papers: Student A: -2 points, Student B: -2.5 points. Did Student A or Student B perform worse on the test?

2. A carp is swimming approximately $8\frac{1}{4}$ feet beneath the water's surface, and a sunfish is swimming approximately $3\frac{1}{2}$ feet beneath the water's surface. Which fish is swimming farther beneath the water's surface?

3. Henry, Janon, and Clark are playing another round of the card game. Their scores this time are as follows: Clark: -1, Janon: -2, and Henry: -4. Who won? Who came in last place?

For each problem, list the rational numbers that relate to each situation. Then, order them from least to greatest, and explain how you made your determination.

4. During their most recent visit to the optometrist (eye doctor), Kadijsha and her sister, Beth, had their vision tested. Kadijsha's vision in her left eye was -1.50, and her vision in her right eye was the opposite number. Beth's vision was -1.00 in her left eye and $+0.25$ in her right eye.

5. There are three pieces of mail in Ms. Thomas's mailbox: a bill from the phone company for $38.12, a bill from the electric company for $67.55, and a tax refund check for $25.89. (A bill is money that you owe, and a tax refund check is money that you receive.)

Problem Set

1. In the table below, list each set of rational numbers in order from least to greatest. Then, list their opposites. Finally, list the opposites in order from least to greatest. The first example has been completed for you.

Rational Numbers	Ordered from Least to Greatest	Opposites	Opposites Ordered from Least to Greatest
$-7.1, \ -7.25$	$-7.25, \ -7.1$	$7.25, \ 7.1$	$7.1, \ 7.25$
$\frac{1}{4}, \ -\frac{1}{2}$			
$2, \ -10$			
$0, \ 3\frac{1}{2}$			
$-5, \ -5.6$			
$24\frac{1}{2}, \ 24$			
$-99.9, \ -100$			
$-0.05, \ -0.5$			
$-0.7, \ 0$			
$100.02, \ 100.04$			

2. For each row, what pattern do you notice between the numbers in the second and fourth columns? Why is this so?