**3.3 – Subtracting Rational Numbers**

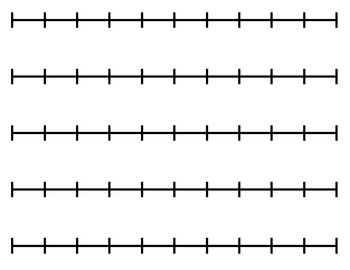
Recall that when adding and subtracting fractions:

1. convert any mixed numbers to improper fractions
2. make the fractions compatible by creating \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. add the numerators and keep the same denominator
4. if the answer is an improper fraction, convert it into a mixed number

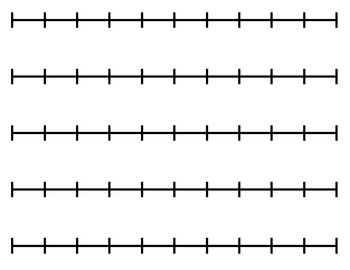
To subtract fractions, you can "add the opposite" just like we did for subtracting negative integers. You may find it helpful to visualize what is happening by using a number line.

Ex 1: Find the difference between each pair of fractions.

(a) (b)



(c) (d)



(e) 4 (f) ( (

Use what you know about subtracting integers to subtract rational numbers in decimal form.

Ex. 2: A diver jumps off a cliff that is 14.7 m above sea level. After hitting the water, he plunges 3.8 m below the surface of the water.

Use a drawing and rational numbers to represent the difference in heights from the top of the cliff to the bottom of his dive.

Assignment: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_