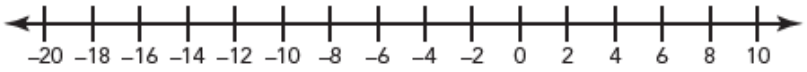
TOPIC 5 Review - Adding and Subtracting Rational Numbers

Objective: REVIEW

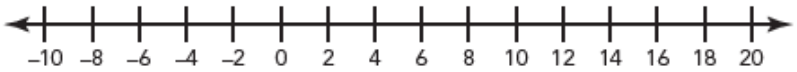
I. Using Number Lines to Add and Subtract Integers

A. Represent each sum or difference on the number line. Then, write the sum or difference.

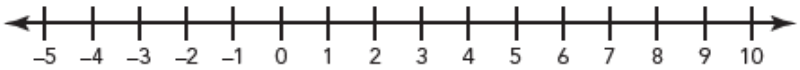
1. $-13 + 1$



2. $11 - (-3)$

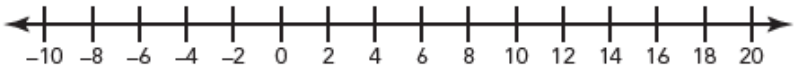


3. $4 + (-4)$



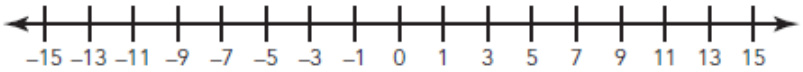
4. $-6 + 3$

5. $11 + (-5)$

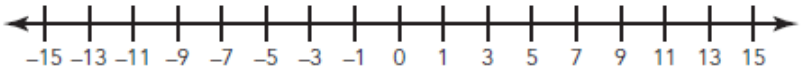


6. $4 + (-5)$

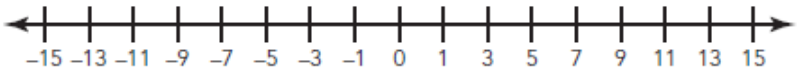
7. $-7 - 4$



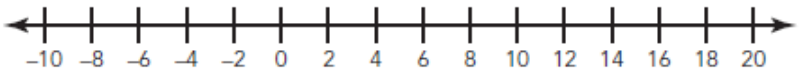
8. $2 - (-10)$



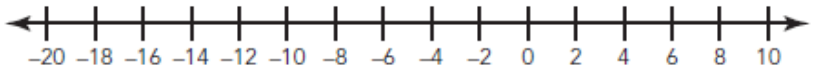
9. $-9 - (-2)$



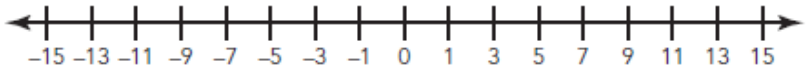
10. $8 - 12$



11. $-5 + (-9)$



12. $-5 - 7$



II. Adding and Subtracting Negative Integers

A. Determine each sum.

1. $0 + (-5)$

2. $-5 + (-4)$

3. $-1 + (-10)$

4. $7 + (-2)$

5. $18 + (-20)$

6. $6 + (-6)$

7. $-10 + 4$

8. $-2 + 16$

9. $-11 + (-6)$

10. $4 + (-6)$

11. $20 + (-10)$

12. $-5 + (-3)$

B. Determine each difference.

1. $0 - (-7)$

2. $-2 - (-12)$

3. $7 - (-2)$

4. $-3 - (-3)$

5. $-10 - (-5)$

6. $10 - (-6)$

7. $12 - (-8)$

8. $-8 - 14$

9. $-10 - 4$

10. $6 - (-9)$

11. $-1 - (-8)$

12. $3 - 15$

C. Complete each number sentence with + or −.

1. $7 \_\_\_\_ (-7) = 0$

2. $-4 \_\_\_\_ (-4) = 0$

3. $2 \_\_\_\_ (-2) = 0$

4. $13 \_\_\_\_ (-13) = 0$

5. $-9 \_\_\_\_ (-9) = 0$

6. $-1 \_\_\_\_ (-1) = 0$

D. Determine each sum or difference.

1. $1 + (-4)$

2. $-4 + (-1)$

3. $-3 - (-11)$

4. $11 + (-1)$

5. $6 + (-10)$

6. $5 + (-12)$

7. $8 - (-14)$

8. $-8 - (-5)$

9. $-8 + (-5)$

10. $-19 - 3$

11. $-4 + (-3)$

12. $17 - (-1)$

D. Sketch a model to estimate. Then, determine each solution and write an equation.

1. The temperature in Chattanooga, Tennessee, is −3°C. The temperature in Sam's hometown is 18 degrees colder than that. What is the temperature in Sam's hometown?

2. Catherine owes $22.50 on her lunch account balance. She pays $15 toward her balance. What is the status of her lunch account balance now?

3. The Subterranean roller coaster rises up to 50.6 feet above the ground before dropping 100.7 feet into an underground cavern. Describe the height of the roller coaster at the bottom of the cavern.

4. To qualify to compete in the high jump finals, athletes must jump a certain height in the semi-finals. Jon jumped $1\frac{5}{8}$ inches below the qualifying height, but his friend Anthony made it to $2\frac{1}{4}$ inches over the qualifying height. How much lower was Jon's semi-final jump compared with Anthony's?

5. A drilling crew dug to a height of $-32\frac{3}{4}$ feet during their first day of drilling. On the second day, the crew dug down $19\frac{2}{3}$ feet more than on the first day. Describe the height of the bottom of the hole after the second day.

6. The freezing point of helium is −458 degrees Fahrenheit. If you increase that temperature by 569.7 degrees Fahrenheit, you reach the freezing point of phosphorus. What is the freezing point of phosphorus?