Questions

1. Explain in words who you would find $-8-(-3)$.

2. Subtract $\frac{3}{4}-\left(-\frac{3}{5}\right)$.

3. Subtract $-\frac{3}{4}-\frac{5}{6}$.

4. Subtract $2.64-(-1.83)$.

5. Combine $-6.4-(-2.7)+5.3$.

6. Combine $42-(-30)-65-(-11)+20$.

7. What is the temperature after a rise of 13°C from a start of −21°C?

Solutions

1. First, change subtracting negative three to adding positive three. Then use the rules for adding two real numbers with different signs. $-8-(-3)=-8+3=-5$.

2.

$$\begin{aligned}\frac{3}{4}-\left(-\frac{3}{5}\right) &= \frac{3}{4}+\frac{3}{5} \text{ subtract by adding the opposite}\\ &= \frac{3\times 5}{4\times 5}+\frac{3\times 4}{5\times 4} \text{ common denominator}\\ &= \frac{15}{20}+\frac{12}{20} \text{ simplify}\\ &= \frac{15+12}{20}\\ &= \frac{27}{20}\end{aligned}$$

3.

$$\begin{aligned}-\frac{3}{4}-\frac{5}{6} &= -\frac{3\times 3}{4\times 3}-\frac{5\times 2}{6\times 2}\\ &= -\frac{9}{12}-\frac{10}{12}\\ &= \frac{-9}{12}+\frac{-10}{12}\\ &= \frac{-9-10}{12}\\ &= \frac{-19}{12}\end{aligned}$$

4. $2.64-(-1.83)=2.64+1.83=4.47$.

5. $-6.4-(-2.7)+5.3=-6.4+2.7+5.3=1.6$.

6. $42-(-30)-65-(-11)+20=42+30-65+11+20=38$.

7. $-21°\text{C}+13°\text{C}=8°\text{C}$.