METHODS AND MEANINGS

MATH NOTES

Connecting Addition and Subtraction of Integers

Another method for subtracting integers is to notice the relationship between addition problems and subtraction problems, as shown below:

$$-3-(-2)=-1 \text{ and } -3+2=-1$$

$$-5-(2)=-7 \text{ and } -5+(-2)=-7$$

$$3-(-3)=6 \text{ and } 3+3=6$$

$$2-(-8)=10 \text{ and } 2+8=10$$

These relationships happen because removing a negative amount gives an identical result to adding the same positive amount and vice versa. The result of subtraction of two integers is the same as the result of the addition of the first integer and the *opposite* (more formally, the **additive inverse**) of the second integer.

Example 1: $-2-(7)=-2+(-7)=-9$

Example 2: $2-(-3)=2+(3)=5$

Example 3: $-8-(-5)=-8+(5)=-3$

Example 4: $2-(9)=2+(-9)=-7$