2.2-2.3 Adding and Subtracting Real Numbers

\[
\begin{align*}
\square & = +1 \\
\square & = -1 \\
\square & = \text{Zero pair}
\end{align*}
\]

ex. 1
Examples

 resolving

 resolving

 resolving

 resolving

 resolving
Adding Integers

\[ -2 + 3 = 1 \]

Other Examples:

\[ -5 + 2 = -3 \]
\[ 3 + -3 \]
\[ -1 + 4 \]
\[ 5 + -6 \]
Subtracting Real Numbers

-2 - 3 = -5

5 - 8

Other Examples
4 - -2
-3 - -2
-6 - 1

6 - 3

0 - 4

-2 - -5
Patterns of Adding and Subtracting Real Numbers

$\text{Add} + \frac{1}{2} + = +$

$\text{Add} - \frac{1}{2} = -$

$\text{Community}$

$3 + 4 = 7$

$4 + 3$

$\text{Subtract} a -$

$-(-) +$

$3 - 4 = -1$

$4 - 3 = 1$
Notecard- Adding and Subtracting Real Numbers

Addition

Commutative Property:
\[ a + b = b + a \]

Associative Property:
\[ (a + b) + c = a + (b + c) \]

Identity Property:
\[ a + 0 = a \]

Property of Zero (zero Pair)
\[ a + (-a) = 0 \]

Subtraction

To subtract \( b \) from \( a \), add the opposite of \( b \) to \( a \)

\[ a - b = a + (-b) \]
Adding and Subtracting Fractions

If two fractions have the same denominator then...

\[
\frac{1}{2} + \frac{1}{2} = \frac{2}{2} = 1
\]

If two fractions have different denominators then...

\[
\frac{4}{5} - \frac{3}{5} = \frac{1}{5}
\]

IMPORTANT: We never add or subtract the denominators!!!