# Integers and Operations with Rational Numbers 

## Why are we studying this?

Understanding rational numbers, as well as their sums, differences, products and quotients can help us to solve real-world problems, such as with temperature, finance, elevation, atomic charge, and even football!

Sample question we will be able to answer: If the high temperature is $30^{\circ} \mathrm{C}$ and the low temperature is $-20^{\circ} \mathrm{C}$, what is the change in
 temperate from the daily low to the daily high?

## Subtopics include:

- Integer Operations
- Integers on a Number Line
- Addition, Subtraction, Multiplication and Division of Rational Numbers, in Context

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## A Note About Homework:

Homework in this unit will focus on concepts learned the prior year, necessary for success in Math One, as well as current topics including operations with integers and rational numbers. Topics include:
-Order of Operations
-Operations with Fractions
-Comparing and Ordering Decimals
-Mixed Review

## Dear Student \& Parent/Guardian,

We are excited to begin the school year with a unit that will expand our understanding of integers and rational numbers and how they can help us interpret real-world data!
We will be using Algebra Tiles to derive the rules for integer operations as well as explore how these operations are performed on a number line. Using these operations we will be able to solve realworld problems.

## -AUHSD Math Teachers

## Essential Questions Addressed in this

 Unit:-What is the opposite of this number? -How are addition and subtraction of integers related?
-How are multiplication and division of integers related?
-How can a visual model or number line help explain the concept of operations with integers?

| Date | Check \# | Transaction | Credit | Debit | Balance |
| :--- | :---: | :--- | :--- | :--- | :--- |
|  |  | Balance Forward |  |  | 712.34 |
| $9 / 3 / 12$ | 361 | Rent |  | 540.00 |  |
| $9 / 3 / 12$ |  | ATM Withdrawal |  | 80.00 |  |
| $9 / 4 / 12$ |  | ATM Deposit | 120.00 |  |  |
| $9 / 6 / 12$ | 363 | Department Store |  | 154.17 |  |
| $9 / 7 / 12$ |  | Direct Deposit Paycheck | 525.36 |  |  |
| $9 / 9 / 12$ | 364 | Gas Station |  | 61.18 |  |

