

## 2.5-2.6

**Enlightening Summary #1:** The Babylonians used a sexagesimal system which allowed them to calculate with fractions with the same facility as integers. The Babylonians also compiled numerous arithmetic tables example squares cubes, square roots, cube roots of numbers 1-50. The Babylonians were also aware of the quadratic formula for solving quadratic equations, the text describes this discovery through exploring the relationship between the perimeter and area of a rectangle. The Babylonians also found it absurd that an equation could have to solution, this led to them discarding the negative solutions from the quadratic formula.

**Enlightening Summary #2:** With the discovery of the Plimpton 322 we know that the Babylonians discovered the Pythagorean Theorem more than a thousand years before Pythagoras was born. through analyzing the Plimpton 322 it was also discovered the the babylonians likely used,

$$z^2 = (m + n)^2 - 2mn$$

rather than,

$$z^2 = m^2 + n^2.$$

**Interesting:** I had never heard the story of how the Babylonians discovered the Pythagorean Theorem before Pythagoras.

**Confusing:** On page 70 there is an example of a Babylonian problem that actually contains a negative number, and it specifically notes that it is in fact a negative number and not symbol for subtraction. So it seems like they were aware of negative numbers, but they also refused to acknowledge negative solutions to quadratic equations.