# Practice Test #1

True or False, and give a _brief_ explanation

#1. Any fraction can be written as a sum of fractions with numerator 1

#2. $\sqrt{20}$ and $\sqrt{45}$ are not commensurable

#3. The Babylonians did not know how to write $\frac{1}{7}$ but the Egyptians did

#4. The laws of physics and chemistry are just as true as the Pythagorean theorem.

#5. Archimedes is known as the "Father of Mechanics"

#6. There are infinitely many perfect numbers

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#7. Prove that a triangle inscribed in a circle with the diameter as its base must be a right triangle

#8. Using the given point as a focus and the line as directrix, sketch a hyperbola with eccentricity 2 (plot at least four points

#9 Write a short paragraph discussing why Euclid's "Elements" is so important