

UPDATED GENERAL INFORMATION — MAY 10, 2016

The second quiz

This quiz may involve familiarity with the congruence method for working Chinese Remainder Theorem problems. Here is one more example along the lines of others in the exercises and worked problem files:

Find all integers n such that (a) n leaves a remainder of 5 when divided by 10, (b) n leaves a remainder of 2 when divided by 7.

Trial and error is an acceptable method for solving $7x \equiv 1 \pmod{10}$ and/or $10x \equiv 1 \pmod{7}$.

The quiz may also involve questions about partial fraction expansions for rational numbers or the application of Pappus' Centroid Theorems to specific examples like the following:

Use the Pappus Centroid Theorem for surfaces of revolution to find the lateral surface area for the cone formed by rotating the line segment $y = mx$ (where $m > 0$ and $0 \leq x \leq h$) about the x -axis.

Note that there are **two** Pappus Centroid Theorems: One for lateral surface areas of surfaces of revolution, and another for volumes of solids of revolution.