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Food for Thought #3

1.

The congruence is as follows:

We now need to find the greatest common divisor between 76 and 105.

Now to check whether the remainder 1 is divisible by 1.

We can rearrange the equation to the following form due to the Symmetric property.

Trivially:

The congruence is as follows:

Finding the gcd:

The remainder 1 is **not** divisible by 3, there is not solution.

The congruence is as follows:

Finding the gcd:

The remainder 17 is divisible by 1

We cannot use the same solution as question one, let’s rewrite the congruence.

We want the left side to be equal to one, we need to find an inverse.

68 works.

Simplify.