7th Grade Homework #1A

Due Date: Feb. 23, 2014

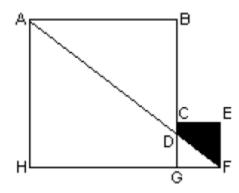
1.

$$\frac{7^{48} - 7^{47} - 7^{46}}{41} = 7^{x}$$

Find x.

2.

A 3-by 3 square adjoins a 10-by-10 square. We are asked to find the area of the shaded region.



3.

$$x + \frac{1}{y} = 1$$

$$y + \frac{1}{2} = 1$$

We are asked to find the value of xyz.

4.

What non-zero, real value of x satisfies

$$(5x)^4 = (10x)^3$$
?