Math 200 - Quiz 8

November 3, 2010

Name key

Score _____

Show all work to receive full credit. Supply explanations when necessary.

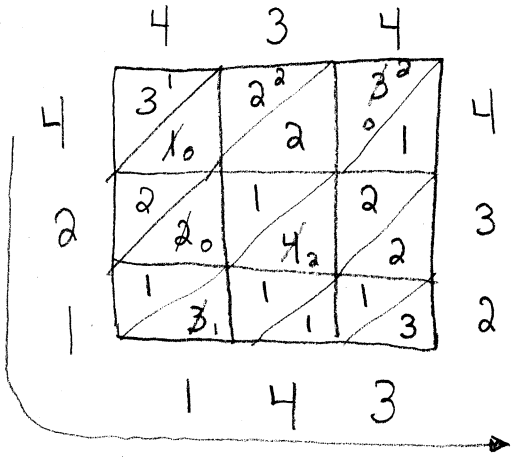
1. (1 point) Carefully explain why $5 \div 0$ is not defined.

MISSING FACTOR: $5 \div 0$ IS THE UNIQUE NUMBER C SUCH THAT $C \cdot 0 = 5$.

THERE IS NO SUCH NUMBER C

$\Rightarrow$ $5 \div 0$ IS NOT DEFINED.

2. (2 point) Use a multiplication algorithm to compute $434_{\text{five}} \times 432_{\text{five}}$.



$434_{\text{FIVE}} \times 432_{\text{FIVE}} = 421\,143_{\text{FIVE}}$

3. (1 point) Use the short division algorithm to compute $2367 \div 4$.

$$4 \overline{)2\,3\,6\,7} \quad 5\,9\,1 \text{ r } 3$$

591 r 3

4. (1 point) Is it ever true that $|x| = -x$? Explain your reasoning.

$|x|$ MUST BE NONNEGATIVE.

YES, IT WILL BE TRUE WHENEVER $x < 0$.

FOR EXAMPLE, IF $x = -3$,

$$|-3| = -(-3) = 3$$