

## Math 55, Euclidean Algorithm Worksheet

Feb 12, 2013

For each pair of integers  $(a, b)$ , use the Euclidean algorithm to find their gcd. Then reverse the steps of the algorithm to find integers  $s$  and  $t$  such that  $as + bt = \gcd(a, b)$ .

1.  $a=254, b=32$

2.  $a=74, b=383$

3.  $a=7544, b=115$

4.  $a=687, b=24$

What is the inverse of 74 mod 383?