Math 580: Quiz 8

Show ALL Work Name _____

1. Calculate $\gcd(\, x^7 + x^6 + x^5 + 3\,x^3 + x^2 - 2,\ x^4 + x^3 + x^2 + 2\,)$.

   Answer: [   ]

2. Using your computations above, find $u(x)$ and $v(x)$ satisfying

$$(x^7 + x^6 + x^5 + 3\,x^3 + x^2 - 2)\,u(x) + (x^4 + x^3 + x^2 + 2)\,v(x)$$
$$= \gcd(\, x^7 + x^6 + x^5 + 3\,x^3 + x^2 - 2,\ x^4 + x^3 + x^2 + 2\,).$$

   $u(x) = $ [   ]

   $v(x) = $ [   ]