

1. (a) Determine if 171223670455851474225580166239137863452373393937576222436615777802879804796090096585920139135499140552609528283070413214548408775743221379 is prime or composite. If its composite, 100 bonus points for factoring it
- (b) Determine if 65626387472912394780123356010343198094838098609389052088002954375832821846236472297596471417651182157773093002682722729459500815309042284039 is prime or composite. If its composite, 100 bonus points for factoring it
2. Suppose you recover the following message fragment: 3898497017518673487573649693560950489313001187749173808144012771919133853821092290583312430012493761066167567885998482516955099390499946737312125703479888930183 from Alice to you. Decipher it knowing it was enciphered with RSA and enciphering key $e = 3041759761146818037630226870275698238867627945661448132424942596621778542798910742799982085475391104979730593337887372633673614452597346239408647623970031821189$ and private keys: $p = 68135261088617535309139966571482920655187283737427105784859108487741668304882757$ and $q = 78551575015890653975029360590355012096281397768416316848045830517336298018186897$.
3. (a) Express the number 619 in binary.
- (b) What number has the hexadecimal expression 113558.