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3. Solveit
(a) Step1 gcol(122.17)
   = 9co (17,122 mod 17) = 9col (17,3) 122= 7x17+3
   = \gcd(3, 17 \mod 3) = \gcd(3, 2) 1)= 5x3+2
    = gcol(2.3mod 2) = gcol(2.1) 3 = 1x2+1
    = gcol (1, 2modi) = gcol (1,0) = 1
 step 2 rearrange equations step 3 backhard substitude
                            1 = 3 - 1x(1) - 5x3
    1=3-1x2
                            = 6x3 - 1x17
        2=17-5x3
                             = 6x(122-7x17)-1x1)
        3= 122-7x17
                                = 6x122-43x1)
     : 6 mod 17 = 6 is the multiplicative inverse of 122 modulo 1)
(b) step 1 gcd (67.43)
                                     67=1×43+24
    = gcd (43.67 mod 43) = gcd (43.24)
                                    43=1×24+19
    = gcol (24.43 mod 24) = gcol (24.19)
                                    24=1×19+5
     = gcol (19. 24 mod 197 = gcol (19,5)
                                    19=3×5+4
     = gcd (5.1) mod 5) = gcd (5.4)
     = gcol (4, 5 mod 4) = gcol (4,1) 5=1×4+1
      = 9cd (1.4 mod1) = 9cd(1.0) =
Step2 reamong steps substitude
                                        Step4 that is 67.9=1 (moel 43)
                                           by mutiplicative property
  1=5-1×4 |=5*1×(19-3×5)
                                          we have 67.9-3=3 (mod 43)
  4=19-3×5 =-1×19+4×(24-1×19)
                                            So am x=9.3 (med 43)
   J=24-1X19
                 = 4x24-5x(43=1x24)
                                             : X=27+43k for KEZ
  18=43-1x24
                  =-5x43+9x(6)-1x43)
                                            1: 0 < 1 < 43 (by def of confusing
   74= 67-1X43
                                            ( K=0 X=2) and divisibility)
                 = 9x67-14x43
           : 9 moel 43=9 is the mutiplicative
                                               (x=2)
                    inverse of 67 modulo 43
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