EX

$17^{18} \bmod 19 = (17^2)^9 \bmod 19 = 289^9 \bmod 19 = 4^9 = 4^{2\cdot 4+1} =$

$= 4\cdot(4^2)^4 = 4\cdot(16)^4 = 4\cdot(16^2)^2 = 4\cdot 256^2 =$

$= 4\cdot 9^2 = 4\cdot 81 = 4\cdot 5 \Rightarrow 20 = 1 \bmod 19$

289 : 19 = 15

19

= 99

95

= 4

256 : 19 = 13

19

= 66

57

= 9

81 : 19 = 4

76

= 5