Script started on Thu Apr 16 12:24:09 2015

bash-3.2$ ./modexp

Modular Exponentiation Calculator (Version ∞):

Calculates solutions to modular exponentiation problems of

the form: x ≡ (a^k) mod n.

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Email -> tylerimdone@gmail.com for additional questions,

suggestions, or thoughts regarding this program.

============================[DIRECTIONS]============================

HOW TO USE: Enter the respective non-negative integer

numbers to the equation: x ≡ (a^k) mod n in the

prompts below.

\*\*\* TO QUIT: enter -1 at any of the prompts. \*\*\*

See "readme.txt" for additinal information about this program.

====================================================================

Enter your a: 1520

Enter your k: 13

Enter your n: 2537

a = 1520, k = 13, n = 2537

Solving x ≡ (1520^13) mod 2537...

i b\_i power=1520^(2^i) mod 2537 x

0 1 1520 1520

1 0 1730 1520

2 1 1777 1672

3 1 1701 95

The answer is x = 95.

Enter your a: 95

Enter your k: 937

Enter your n: 2537

a = 95, k = 937, n = 2537

Solving x ≡ (95^937) mod 2537...

i b\_i power=95^(2^i) mod 2537 x

0 1 95 95

1 0 1414 95

2 0 240 95

3 1 1786 2228

4 0 787 2228

5 1 341 1185

6 0 2116 1185

7 1 2188 2503

8 1 25 1687

9 1 625 1520

The answer is x = 1520.

Enter your a: 1621

Enter your k: 13

Enter your n: 2537

a = 1621, k = 13, n = 2537

Solving x ≡ (1621^13) mod 2537...

i b\_i power=1621^(2^i) mod 2537 x

0 1 1621 1621

1 0 1846 1621

2 1 525 1130

3 1 1629 1445

The answer is x = 1445.

Enter your a: 1447 5

Enter your k: 937

Enter your n: 2537

a = 1445, k = 937, n = 2537

Solving x ≡ (1445^937) mod 2537...

i b\_i power=1445^(2^i) mod 2537 x

0 1 1445 1445

1 0 74 1445

2 0 402 1445

3 1 1773 2152

4 0 186 2152

5 1 1615 2327

6 0 189 2327

7 1 203 499

8 1 617 906

9 1 139 1621

The answer is x = 1621.

Enter your a: -1

bash-3.2$ exit

exit

Script done on Thu Apr 16 12:25:12 2015