

REPORT

5 results of different values of a, b, n:

When $a = 13$, $b = 17$, $n = 21$

Value of $(a^b)\%n = 13$

The final result in gdb (using display command) when given the above inputs of a, b, n :

```
1: $rax = 60      # Sys call on exit
2: $r8 = 1        # Stores a (modified after operations performed)
3: $r9 = 0        # Stores b (modified after operations performed)
4: $r10 = 21      # Stores n
5: $r11 = 13      # Final result in %r11
```

When $a = 0$, $b = 0$, $n = 1$

Value of $(a^b)\%n = 1$

The final result in gdb (using display command) when given the above inputs of a, b, n :

```
1: $rax = 60      # Sys call on exit
2: $r8 = 0        # Stores a (modified after operations performed)
3: $r9 = 0        # Stores b (modified after operations performed)
4: $r10 = 1       # Stores n
5: $r11 = 1       # Final result in %r11
```

When $a = 145$, $b = 273$, $n = 639$

Value of $(a^b)\%n = 289$

The final result in gdb (using display command) when given the above inputs of a, b, n :

```
1: $rax = 60      # Sys call on exit
2: $r8 = 217      # Stores a (modified after operations performed)
3: $r9 = 0        # Stores b (modified after operations performed)
4: $r10 = 639     # Stores n
5: $r11 = 289     # Final result in %r11
```

When $a = 2001$, $b = 2002$, $n = 2003$

Value of $(a^b)\%n = 1$

The final result in gdb (using display command) when given the above inputs of a, b, n :

```
1: $rax = 60      # Sys call on exit
2: $r8 = 1936     # Stores a (modified after operations performed)
3: $r9 = 0        # Stores b (modified after operations performed)
4: $r10 = 2003    # Stores n
5: $r11 = 1       # Final result in %r11
```

When $a = 100$, $b = 100$, $n = 100$

Value of $(a^b)\%n = 0$

The final result in gdb (using display command) when given the above inputs of a, b, n :

```
1: $rax = 60      # Sys call on exit
2: $r8 = 0        # Stores a (modified after operations performed)
3: $r9 = 0        # Stores b (modified after operations performed)
4: $r10 = 100     # Stores n
5: $r11 = 0       # Final result in %r11
```