

NAME

`BN_cmp`, `BN_ucmp`, `BN_is_zero`, `BN_is_one`, `BN_is_word`, `BN_abs_is_word`, `BN_is_odd` - BIGNUM comparison and test functions

SYNOPSIS

```
#include <openssl/bn.h>
```

```
int BN_cmp(const BIGNUM *a, const BIGNUM *b);  
int BN_ucmp(const BIGNUM *a, const BIGNUM *b);
```

```
int BN_is_zero(const BIGNUM *a);  
int BN_is_one(const BIGNUM *a);  
int BN_is_word(const BIGNUM *a, const BN_ULONG w);  
int BN_abs_is_word(const BIGNUM *a, const BN_ULONG w);  
int BN_is_odd(const BIGNUM *a);
```

DESCRIPTION

`BN_cmp()` compares the numbers a and b . `BN_ucmp()` compares their absolute values.

`BN_is_zero()`, `BN_is_one()`, `BN_is_word()` and `BN_abs_is_word()` test if a equals 0, 1, w , or $|w|$ respectively. `BN_is_odd()` tests if a is odd.

RETURN VALUES

`BN_cmp()` returns -1 if $a < b$, 0 if $a == b$ and 1 if $a > b$. `BN_ucmp()` is the same using the absolute values of a and b .

`BN_is_zero()`, `BN_is_one()`, `BN_is_word()`, `BN_abs_is_word()` and `BN_is_odd()` return 1 if the condition is true, 0 otherwise.

HISTORY

Prior to OpenSSL 1.1.0, `BN_is_zero()`, `BN_is_one()`, `BN_is_word()`, `BN_abs_is_word()` and `BN_is_odd()` were macros.

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