

NAME

`BN_add_word`, `BN_sub_word`, `BN_mul_word`, `BN_div_word`, `BN_mod_word` - arithmetic functions on `BIGNUM`s with integers

SYNOPSIS

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

```
int BN_add_word(BIGNUM *a, BN_ULONG w);
```

```
int BN_sub_word(BIGNUM *a, BN_ULONG w);
```

```
int BN_mul_word(BIGNUM *a, BN_ULONG w);
```

```
BN_ULONG BN_div_word(BIGNUM *a, BN_ULONG w);
```

```
BN_ULONG BN_mod_word(const BIGNUM *a, BN_ULONG w);
```

DESCRIPTION

These functions perform arithmetic operations on `BIGNUM`s with unsigned integers. They are much more efficient than the normal `BIGNUM` arithmetic operations.

BN_add_word() adds `w` to `a` ("a+=w").

BN_sub_word() subtracts `w` from `a` ("a-=w").

BN_mul_word() multiplies `a` and `w` ("a*=w").

BN_div_word() divides `a` by `w` ("a/=w") and returns the remainder.

BN_mod_word() returns the remainder of `a` divided by `w` ("a%w").

For **BN_div_word()** and **BN_mod_word()**, `w` must not be 0.

RETURN VALUES

BN_add_word(), **BN_sub_word()** and **BN_mul_word()** return 1 for success, 0 on error. The error codes can be obtained by **ERR_get_error(3)**.

BN_mod_word() and **BN_div_word()** return `a%w` on success and **(BN_ULONG)-1** if an error occurred.

SEE ALSO

ERR_get_error(3), **BN_add(3)**

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