Pseudo-code:

long power (long x, long n)

if (n == 0)

return 1;

if ((n % 2) == 0)

return power (x, n/2) \* power (x, n/2);

else

return x \* power (x, n/2) \* power (x, n/2);

Recurrence relation:

1, when n=0

f(n) power (x, n/2) \* power (x, n/2), when n%2=0

x \* power (x, n/2) \* power (x, n/2), when n%2!=0 & n!=0