

(.)- -

<"xml encoding="UTF-8?>

()

(.)-

(.), (.)-

, , , _

:

! , "

, - , -

, ()

-

!

,

!

,

-

-

;

-

-

-

-

-

(-)

-

-

-

-

-

-

-

； ； -
； - ；

！ - () -
- ；

- - -

！ -
,

！ , ()
！ ,

！ -

() ；

！ ,
()

！ ； -

！ ； ；

； - ； -
； ,
；

!! ! -

！ ； -

;

;

;

;

;

-

!

-

,

;

-

-

;

;

,

-

;

-

;

(

)

!

;

;

-

!

(

)

!

!

,

,

!

,

-

,

-

,

,

,

,

;

;

(

)

()

,

! ,
,

"

(.) , -

(.) (.)-

(.)- , " (.)- :
:

(
, '
)
"

: (.)

: (.) (.)- "

() :
() : (.)-
: (.)- ? :

() ()

: (.)- :

?

:

”

(.)-

, (.)

,

‘

’

:

(.)

:

(.)-

:

.

(.

(

.

(. (

, (.)-

(.)

!

;

;“

(.)

,

()

,

(.)

(.) ;

”

(.)-

-

-

(.)

,

(.)-

,

,

?

“

”

(.)

-

“

”

,

(.)

(.)-

,

“

(.)-

”

(.)-

,

, , -

-

,

(.)

,

(.)

(.)-

“ !

,

,

() ”

(.)

“ !

()

”

“

”

(.)

“

-

()

(

) ”

(.) (.) “ , !
” ,

“
” ,

, , - ,

“ , , “
” -

“ , , “

() “ -
(.) -
 , -

(.) “ ! , , ,
”

(.) “ (,
,) ! ,
, “ (‘ ,
(

(.) (.)-
(:) (.)’ - (,
) (, ,

(.)- (.)- - ,
,
,

, (.)

()

, (), (

) (.)

-

(.)

,

,

!!

,

,

(.)-

,

”

,

, - , , -

-

(.)-

,

-

,

-

,

-

, (.)-

(.)

-

-

“
”

”

,

,

-

,

,

,

,

,

“

”

(.)-

()

• , • ; , • ; , • ;
 , • ; , •

. : () , :
 (. , . ,
 (, ()

• () ; , , . .

• $\frac{1}{2} \left(\frac{1}{2} \right) = \frac{1}{4}$; $\frac{1}{4} \left(\frac{1}{2} \right) = \frac{1}{8}$; $\frac{1}{8} \left(\frac{1}{2} \right) = \frac{1}{16}$; $\frac{1}{16} \left(\frac{1}{2} \right) = \frac{1}{32}$; $\frac{1}{32} \left(\frac{1}{2} \right) = \frac{1}{64}$; $\frac{1}{64} \left(\frac{1}{2} \right) = \frac{1}{128}$; $\frac{1}{128} \left(\frac{1}{2} \right) = \frac{1}{256}$; $\frac{1}{256} \left(\frac{1}{2} \right) = \frac{1}{512}$; $\frac{1}{512} \left(\frac{1}{2} \right) = \frac{1}{1024}$; $\frac{1}{1024} \left(\frac{1}{2} \right) = \frac{1}{2048}$; $\frac{1}{2048} \left(\frac{1}{2} \right) = \frac{1}{4096}$; $\frac{1}{4096} \left(\frac{1}{2} \right) = \frac{1}{8192}$; $\frac{1}{8192} \left(\frac{1}{2} \right) = \frac{1}{16384}$; $\frac{1}{16384} \left(\frac{1}{2} \right) = \frac{1}{32768}$; $\frac{1}{32768} \left(\frac{1}{2} \right) = \frac{1}{65536}$; $\frac{1}{65536} \left(\frac{1}{2} \right) = \frac{1}{131072}$; $\frac{1}{131072} \left(\frac{1}{2} \right) = \frac{1}{262144}$; $\frac{1}{262144} \left(\frac{1}{2} \right) = \frac{1}{524288}$; $\frac{1}{524288} \left(\frac{1}{2} \right) = \frac{1}{1048576}$; $\frac{1}{1048576} \left(\frac{1}{2} \right) = \frac{1}{2097152}$; $\frac{1}{2097152} \left(\frac{1}{2} \right) = \frac{1}{4194304}$; $\frac{1}{4194304} \left(\frac{1}{2} \right) = \frac{1}{8388608}$; $\frac{1}{8388608} \left(\frac{1}{2} \right) = \frac{1}{16777216}$; $\frac{1}{16777216} \left(\frac{1}{2} \right) = \frac{1}{33554432}$; $\frac{1}{33554432} \left(\frac{1}{2} \right) = \frac{1}{67108864}$; $\frac{1}{67108864} \left(\frac{1}{2} \right) = \frac{1}{134217728}$; $\frac{1}{134217728} \left(\frac{1}{2} \right) = \frac{1}{268435456}$; $\frac{1}{268435456} \left(\frac{1}{2} \right) = \frac{1}{536870912}$; $\frac{1}{536870912} \left(\frac{1}{2} \right) = \frac{1}{1073741824}$; $\frac{1}{1073741824} \left(\frac{1}{2} \right) = \frac{1}{2147483648}$; $\frac{1}{2147483648} \left(\frac{1}{2} \right) = \frac{1}{4294967296}$; $\frac{1}{4294967296} \left(\frac{1}{2} \right) = \frac{1}{8589934592}$; $\frac{1}{8589934592} \left(\frac{1}{2} \right) = \frac{1}{17179869184}$; $\frac{1}{17179869184} \left(\frac{1}{2} \right) = \frac{1}{34359738368}$; $\frac{1}{34359738368} \left(\frac{1}{2} \right) = \frac{1}{68719476736}$; $\frac{1}{68719476736} \left(\frac{1}{2} \right) = \frac{1}{137438953472}$; $\frac{1}{137438953472} \left(\frac{1}{2} \right) = \frac{1}{274877906944}$; $\frac{1}{274877906944} \left(\frac{1}{2} \right) = \frac{1}{549755813888}$; $\frac{1}{549755813888} \left(\frac{1}{2} \right) = \frac{1}{1099511627776}$; $\frac{1}{1099511627776} \left(\frac{1}{2} \right) = \frac{1}{2199023255552}$; $\frac{1}{2199023255552} \left(\frac{1}{2} \right) = \frac{1}{4398046511104}$; $\frac{1}{4398046511104} \left(\frac{1}{2} \right) = \frac{1}{8796093022208}$; $\frac{1}{8796093022208} \left(\frac{1}{2} \right) = \frac{1}{17592186044416}$; $\frac{1}{17592186044416} \left(\frac{1}{2} \right) = \frac{1}{35184372088832}$; $\frac{1}{35184372088832} \left(\frac{1}{2} \right) = \frac{1}{70368744177664}$; $\frac{1}{70368744177664} \left(\frac{1}{2} \right) = \frac{1}{140737488355328}$; $\frac{1}{140737488355328} \left(\frac{1}{2} \right) = \frac{1}{281474976710656}$; $\frac{1}{281474976710656} \left(\frac{1}{2} \right) = \frac{1}{562949953421312}$; $\frac{1}{562949953421312} \left(\frac{1}{2} \right) = \frac{1}{1125899906842624}$; $\frac{1}{1125899906842624} \left(\frac{1}{2} \right) = \frac{1}{2251799813685248}$; $\frac{1}{2251799813685248} \left(\frac{1}{2} \right) = \frac{1}{4503599627370496}$; $\frac{1}{4503599627370496} \left(\frac{1}{2} \right) = \frac{1}{9007199254740992}$; $\frac{1}{9007199254740992} \left(\frac{1}{2} \right) = \frac{1}{18014398509481984}$; $\frac{1}{18014398509481984} \left(\frac{1}{2} \right) = \frac{1}{36028797018963968}$; $\frac{1}{36028797018963968} \left(\frac{1}{2} \right) = \frac{1}{72057594037927936}$; $\frac{1}{72057594037927936} \left(\frac{1}{2} \right) = \frac{1}{144115188075855872}$; $\frac{1}{144115188075855872} \left(\frac{1}{2} \right) = \frac{1}{288230376151711744}$; $\frac{1}{288230376151711744} \left(\frac{1}{2} \right) = \frac{1}{576460752303423488}$; $\frac{1}{576460752303423488} \left(\frac{1}{2} \right) = \frac{1}{1152921504606846976}$; $\frac{1}{1152921504606846976} \left(\frac{1}{2} \right) = \frac{1}{2305843009213693952}$; $\frac{1}{2305843009213693952} \left(\frac{1}{2} \right) = \frac{1}{4611686018427387904}$; $\frac{1}{4611686018427387904} \left(\frac{1}{2} \right) = \frac{1}{9223372036854775808}$; $\frac{1}{9223372036854775808} \left(\frac{1}{2} \right) = \frac{1}{18446744073709551616}$; $\frac{1}{18446744073709551616} \left(\frac{1}{2} \right) = \frac{1}{36893488147419103232}$; $\frac{1}{36893488147419103232} \left(\frac{1}{2} \right) = \frac{1}{73786976294838206464}$; $\frac{1}{73786976294838206464} \left(\frac{1}{2} \right) = \frac{1}{147573952589676412928}$; $\frac{1}{147573952589676412928} \left(\frac{1}{2} \right) = \frac{1}{295147905179352825856}$; $\frac{1}{295147905179352825856} \left(\frac{1}{2} \right) = \frac{1}{590295810358705651712}$; $\frac{1}{590295810358705651712} \left(\frac{1}{2} \right) = \frac{1}{1180591620717411303424}$; $\frac{1}{1180591620717411303424} \left(\frac{1}{2} \right) = \frac{1}{2361183241434822606848}$; $\frac{1}{2361183241434822606848} \left(\frac{1}{2} \right) = \frac{1}{4722366482869645213696}$; $\frac{1}{4722366482869645213696} \left(\frac{1}{2} \right) = \frac{1}{9444732965739290427392}$; $\frac{1}{9444732965739290427392} \left(\frac{1}{2} \right) = \frac{1}{18889465931478580854784}$; $\frac{1}{18889465931478580854784} \left(\frac{1}{2} \right) = \frac{1}{37778931862957161709568}$; $\frac{1}{37778931862957161709568}$

• (), . ,

• $\frac{1}{2} \cdot \frac{1}{2} = \frac{1}{4}$ $\frac{1}{4} \cdot \frac{1}{2} = \frac{1}{8}$ $\frac{1}{8} \cdot \frac{1}{2} = \frac{1}{16}$ $\frac{1}{16} \cdot \frac{1}{2} = \frac{1}{32}$ $\frac{1}{32} \cdot \frac{1}{2} = \frac{1}{64}$ $\frac{1}{64} \cdot \frac{1}{2} = \frac{1}{128}$ $\frac{1}{128} \cdot \frac{1}{2} = \frac{1}{256}$ $\frac{1}{256} \cdot \frac{1}{2} = \frac{1}{512}$ $\frac{1}{512} \cdot \frac{1}{2} = \frac{1}{1024}$ $\frac{1}{1024} \cdot \frac{1}{2} = \frac{1}{2048}$ $\frac{1}{2048} \cdot \frac{1}{2} = \frac{1}{4096}$ $\frac{1}{4096} \cdot \frac{1}{2} = \frac{1}{8192}$ $\frac{1}{8192} \cdot \frac{1}{2} = \frac{1}{16384}$ $\frac{1}{16384} \cdot \frac{1}{2} = \frac{1}{32768}$ $\frac{1}{32768} \cdot \frac{1}{2} = \frac{1}{65536}$ $\frac{1}{65536} \cdot \frac{1}{2} = \frac{1}{131072}$ $\frac{1}{131072} \cdot \frac{1}{2} = \frac{1}{262144}$ $\frac{1}{262144} \cdot \frac{1}{2} = \frac{1}{524288}$ $\frac{1}{524288} \cdot \frac{1}{2} = \frac{1}{1048576}$ $\frac{1}{1048576} \cdot \frac{1}{2} = \frac{1}{2097152}$ $\frac{1}{2097152} \cdot \frac{1}{2} = \frac{1}{4194304}$ $\frac{1}{4194304} \cdot \frac{1}{2} = \frac{1}{8388608}$ $\frac{1}{8388608} \cdot \frac{1}{2} = \frac{1}{16777216}$ $\frac{1}{16777216} \cdot \frac{1}{2} = \frac{1}{33554432}$ $\frac{1}{33554432} \cdot \frac{1}{2} = \frac{1}{67108864}$ $\frac{1}{67108864} \cdot \frac{1}{2} = \frac{1}{134217728}$ $\frac{1}{134217728} \cdot \frac{1}{2} = \frac{1}{268435456}$ $\frac{1}{268435456} \cdot \frac{1}{2} = \frac{1}{536870912}$ $\frac{1}{536870912} \cdot \frac{1}{2} = \frac{1}{1073741824}$ $\frac{1}{1073741824} \cdot \frac{1}{2} = \frac{1}{2147483648}$ $\frac{1}{2147483648} \cdot \frac{1}{2} = \frac{1}{4294967296}$ $\frac{1}{4294967296} \cdot \frac{1}{2} = \frac{1}{8589934592}$ $\frac{1}{8589934592} \cdot \frac{1}{2} = \frac{1}{17179869184}$ $\frac{1}{17179869184} \cdot \frac{1}{2} = \frac{1}{34359738368}$ $\frac{1}{34359738368} \cdot \frac{1}{2} = \frac{1}{68719476736}$ $\frac{1}{68719476736} \cdot \frac{1}{2} = \frac{1}{137438953472}$ $\frac{1}{137438953472} \cdot \frac{1}{2} = \frac{1}{274877906944}$ $\frac{1}{274877906944} \cdot \frac{1}{2} = \frac{1}{549755813888}$ $\frac{1}{549755813888} \cdot \frac{1}{2} = \frac{1}{1099511627776}$ $\frac{1}{1099511627776} \cdot \frac{1}{2} = \frac{1}{2199023255552}$ $\frac{1}{2199023255552} \cdot \frac{1}{2} = \frac{1}{4398046511104}$ $\frac{1}{4398046511104} \cdot \frac{1}{2} = \frac{1}{8796093022208}$ $\frac{1}{8796093022208} \cdot \frac{1}{2} = \frac{1}{17592186044416}$ $\frac{1}{17592186044416} \cdot \frac{1}{2} = \frac{1}{35184372088832}$ $\frac{1}{35184372088832} \cdot \frac{1}{2} = \frac{1}{70368744177664}$ $\frac{1}{70368744177664} \cdot \frac{1}{2} = \frac{1}{140737488355328}$ $\frac{1}{140737488355328} \cdot \frac{1}{2} = \frac{1}{281474976710656}$ $\frac{1}{281474976710656} \cdot \frac{1}{2} = \frac{1}{562949953421312}$ $\frac{1}{562949953421312} \cdot \frac{1}{2} = \frac{1}{1125899906842624}$ $\frac{1}{1125899906842624} \cdot \frac{1}{2} = \frac{1}{2251799813685248}$ $\frac{1}{2251799813685248} \cdot \frac{1}{2} = \frac{1}{4503599627370496}$ $\frac{1}{4503599627370496} \cdot \frac{1}{2} = \frac{1}{9007199254740992}$ $\frac{1}{9007199254740992} \cdot \frac{1}{2} = \frac{1}{18014398509481984}$ $\frac{1}{18014398509481984} \cdot \frac{1}{2} = \frac{1}{36028797018963968}$ $\frac{1}{36028797018963968} \cdot \frac{1}{2} = \frac{1}{72057594037927936}$ $\frac{1}{72057594037927936} \cdot \frac{1}{2} = \frac{1}{144115188075855872}$ $\frac{1}{144115188075855872} \cdot \frac{1}{2} = \frac{1}{288230376151711744}$ $\frac{1}{288230376151711744} \cdot \frac{1}{2} = \frac{1}{576460752303423488}$ $\frac{1}{576460752303423488} \cdot \frac{1}{2} = \frac{1}{1152921504606846976}$ $\frac{1}{1152921504606846976} \cdot \frac{1}{2} = \frac{1}{2305843009213693952}$ $\frac{1}{2305843009213693952} \cdot \frac{1}{2} = \frac{1}{4611686018427387904}$ $\frac{1}{4611686018427387904} \cdot \frac{1}{2} = \frac{1}{9223372036854775808}$ $\frac{1}{9223372036854775808} \cdot \frac{1}{2} = \frac{1}{18446744073709551616}$ $\frac{1}{18446744073709551616} \cdot \frac{1}{2} = \frac{1}{36893488147419103232}$ $\frac{1}{36893488147419103232} \cdot \frac{1}{2} = \frac{1}{73786976294838206464}$ $\frac{1}{73786976294838206464} \cdot \frac{1}{2} = \frac{1}{147573952589676412928}$ $\frac{1}{147573952589676412928} \cdot \frac{1}{2} = \frac{1}{295147905179352825856}$ $\frac{1}{295147905179352825856} \cdot \frac{1}{2} = \frac{1}{590295810358705651712}$ $\frac{1}{590295810358705651712} \cdot \frac{1}{2} = \frac{1}{1180591620717411303424}$ $\frac{1}{1180591620717411303424} \cdot \frac{1}{2} = \frac{1}{2361183241434822606848}$ $\frac{1}{2361183241434822606848} \cdot \frac{1}{2} = \frac{1}{4722366482869645213696}$ $\frac{1}{4722366482869645213696} \cdot \frac{1}{2} = \frac{1}{9444732965739290427392}$ $\frac{1}{9444732965739290427392} \cdot \frac{1}{2} = \frac{1}{18889465931478580854784}$ $\frac{1}{18889465931478580854784} \cdot \frac{1}{2} = \frac{1}{37778931862957161709568}$ $\frac{1}{37778931862957161709568} \cdot \frac{1}{2} = \frac{1}{75557863725914323419136}$ $\frac{1}{75557863725914323419136} \cdot \frac{1}{2} = \frac{1}{151115727451828646838272}$ $\frac{1}{151115727451828646838272} \cdot \frac{1}{2} = \frac{1}{302231454903657293676544}$ $\frac{1}{302231454903657293676544} \cdot \frac{1}{2} = \frac{1}{604462909807314587353088}$ $\frac{1}{604462909807314587353088} \cdot \frac{1}{2} = \frac{1}{1208925819614629174706176}$ $\frac{1}{1208925819614629174706176}$

• *Journal of the American Medical Association*, 2000; 283: 2639-2645

•

(.

, • ,

(

• , •

(, ,)