**Directions for advanced Calculator math skills: Division**

1. Have the client read a math problem (such as, "four divided by Two equals \_\_\_\_"). This equation is also read by saying 4 ÷ 2 =.

 \_\_\_

2 ) 4

Have the client look at the division tables and look for the answer for the equation

4 ÷ 2 =.

Math Skills : Division Tables

**1** **÷ 1 = 1 2 ÷ 2 = 1 3 ÷ 3 = 1 4 ÷ 4 = 1**

**2 ÷ 1 = 2 4 ÷ 2 = 2 6 ÷ 3 = 2 8 ÷ 4 = 2**

**3 ÷ 1 = 3 6 ÷ 2 = 3 9 ÷ 3 = 3 12 ÷ 4 = 3**

**4 ÷ 1 = 4 8 ÷ 2 = 4 12 ÷ 3 = 4 16 ÷ 4 = 4**

**5 ÷ 1 = 5 10 ÷ 2 = 5 15 ÷ 3 = 5 20 ÷ 4 = 5**

**6 ÷ 1 = 6 12 ÷ 2 = 6 18 ÷ 3 = 6 24 ÷ 4 = 6**

**7 ÷ 1 = 7 14 ÷ 2 = 7 21 ÷ 3 = 7 28 ÷ 4 = 7**

**8 ÷ 1 = 8 16 ÷ 2 = 8 24 ÷ 3 = 8 32 ÷ 4 = 8**

**9 ÷ 1 = 9 18 ÷ 2 = 9 27 ÷ 3 = 9 36 ÷ 4 = 9**

**10 ÷ 1 =10 20 ÷ 2 =10 30 ÷ 3 =10 40 ÷ 4 =10**

**5 ÷ 5 = 1 6 ÷ 6 = 1 7 ÷ 7 = 1 8 ÷ 8 = 1**

**10 ÷ 5 = 2 12 ÷ 6 = 2 14 ÷ 7 = 2 16 ÷ 8 = 2**

**15 ÷ 5 = 3 18 ÷ 6 = 3 21 ÷ 7 = 3 24 ÷ 8 = 3**

**20 ÷ 5 = 4 24 ÷ 6 = 4 28 ÷ 7 = 4 32 ÷ 8 = 4**

**25 ÷ 5 = 5 30 ÷ 6 = 5 35 ÷ 7 = 5 40 ÷ 8 = 5**

**30 ÷ 5 = 6 36 ÷ 6 = 6 42 ÷ 7 = 6 48 ÷ 8 = 6**

**35 ÷ 5 = 7 42 ÷ 6 = 7 49 ÷ 7 = 7 56 ÷ 8 = 7**

**40 ÷ 5 = 8 48 ÷ 6 = 8 56 ÷ 7 = 8 64 ÷ 8 = 8**

**45 ÷ 5 = 9 54 ÷ 6 = 9 63 ÷ 7 = 9 72 ÷ 8 = 9**

**50 ÷ 5 =10 60 ÷ 6 =10 70 ÷ 7 =10 80 ÷ 8 =10**

**9 ÷ 9 = 1 10 ÷ 10 = 1 11 ÷ 11 = 1 12 ÷ 12 = 1**

**18 ÷ 9 = 2 20 ÷ 10 = 2 22 ÷ 11 = 2 24 ÷ 12 = 2**

**27 ÷ 9 = 3 30 ÷ 10 = 3 33 ÷ 11 = 3 36 ÷ 12 = 3**

**36 ÷ 9 = 4 40 ÷ 10 = 4 44 ÷ 11 = 4 48 ÷ 12 = 4**

**45 ÷ 9 = 5 50 ÷ 10 = 5 55 ÷ 11 = 5 60 ÷ 12 = 5**

**54 ÷ 9 = 6 60 ÷ 10 = 6 66 ÷ 11 = 6 72 ÷ 12 = 6**

**63 ÷ 9 = 7 70 ÷ 10 = 7 77 ÷ 11 = 7 84 ÷ 12 = 7**

**72 ÷ 9 = 8 80 ÷ 10 = 8 88 ÷ 11 = 8 96 ÷ 12 = 8**

**81 ÷ 9 = 9 90 ÷ 10 = 9 99 ÷ 11 = 9 108 ÷ 12 =9**

**90 ÷ 9 =10 100 ÷ 10 =10 110 ÷ 11 =10 120 ÷ 12=10**

As the answer is 2, the client can then state that four divided by two = two, or 4 ÷ 2 = 2.

However, the best way to visualize how division actually works is to do what we did with multiplication in reverse: Let’s say we are dividing Twelve by Two, and we represent the twelve with pictures of stars.

Here we have 12 stars. If we wish to show that twelve is divided by two, or 12 ÷ 2 = , we end up with two groups of the twelve stars like this, so that twelve divided by two equals six, or 12 ÷ 2 = 6:

What we have here now is two groupings of six stars, so that twelve divided by two equals six.

If we wish to show that twelve can also be divided by 6, we can show it this way:

Here are twelve stars. Now we divide them by six:

Here we now have six groups of two and so Twelve divided by Six equals Two, or
12 ÷ 6 = 2.

You may do pages of simple division problems like this above:

When doing division that is a little more complicated, let’s look at another typical problem: Forty–two divided by Three equals, or 42 ÷ 3 =

 \_\_\_
3 ) 42

With looking at the math tables for division, the client can find the “three” (3) column of divisors, and see that the number 4 in 42 comes between the 3 and the 6. Three goes into 4 one time only (as the number four is just above the number 3) and the 1 is placed above the four above the line and the three is placed under the four, like this:

 \_1\_\_
3 ) 42
 3\_

 1

So four divided by three equals 1 (placed above the four above the line), with one left over (placed below the three underneath), or one can say, three goes into four one time with 1 left over. The three that is placed below the four is then subtracted from the four leaving a remainder of 1, which is placed beneath the three. Then the 2 is dropped down and placed beside the one, like this:

 \_1\_\_
3 ) 42
 3\_

 12

The next step is to divide the 12 by three. The client looks at the division table and determines that twelve divided by three equals four, or 12 ÷ 3 = 4. The four is placed above the lie beside the one, above the 2, and the 12 is placed under the twelve and subtracted, leaving a zero, like this:

 \_ 14\_\_
3 ) 42
 3\_
 12
 12

When looking at a division problem like seven hundred and ninety-two divided by twenty-two, or 792 ÷ 22 =, one first has to look at the division tables.

 \_\_\_\_
22 ) 792

Division actually involves a lot of guessing initially. The client askes how many times could 2 go into 7, or what is the closest answer to 7 divided by 2? The tables would indicate that 3 is the closest answer and a three is then placed above the 9 above the line, like this:

 \_\_3\_\_\_
22 ) 792

The number 22 is then multiplied by 3, and using the multiplication tables for 2 X 3, the answer is 66. The number 66 is place under the 79 in the number 792, like this:

 \_\_3\_\_\_
22 ) 792
 66\_\_\_

The number 66 is then subtracted from 79, and that number is 13 and is placed under the 66 under the line, like this:

 \_\_3\_\_\_
22 ) 792
 66\_\_\_
 13

The number 13 cannot be divided by the number 22 so the two is then dropped down, like this:

 \_\_3\_\_\_
22 ) 792
 66\_\_\_
 132

Two goes into 13 six times, or 13 can be divided by 2 to equal 6. The 6 is placed above the two in 792 above the line and then six is multiplied by 22 to get 132, like this:

 \_\_36\_\_\_
22 ) 792
 66\_\_\_
 132
 132
 0

When dividing produces remainders or fractions, it is important to follow the same procedures outlined above: Let’s say for the equation 7 divided by 3.

 \_\_\_
3 ) 7

The number 7 can be divided by three into 2, from the tables, with a remainder of 1, or represented also as 1/3, like this:

 \_2\_r1\_
3 ) 7
 6\_\_
 1

**Or**

 \_2\_1/3\_
3 ) 7
 6\_\_
 1

When doing complex division, the same steps and procedures are used: Let’s take the equation, eight hundred and twenty-three divided by eighteen equals, or 823 ÷ 18 =.

 \_\_\_\_
18 ) 823

When analyzing this problem (823 ÷ 18 =) it might be best to guess that the number 18 is close to the number 20, and 20 into 80 (eighty divided by twenty) would be four. So perhaps 18 into 82 is approximately four, so placing a four temporarily above the 2 in the number 823 begins the process, like this.

 \_\_4\_\_
18 ) 823

The client then multiplies 4 times 18 and gets the answer 72 which is then placed below the eighty two in 823, like this:
 \_\_4\_\_
18 ) 823
 72\_\_

The client then subtracts 72 from 82 and gets the following answer, like this:

 \_\_**4**\_\_
18 ) 823
 72\_\_
 103

Using the same logic as above, the client looks at dividing 103 by 18 and guesses that 18 is close to twenty and twenty goes into 103 about 5 times, like this:

 \_\_**45\_\_
18 ) 823
 72\_\_
 103**

Multiplying 5 times 18 gives the answer of 90 which is placed under the 103, like this:

 \_\_**45\_\_
18 ) 823
 72\_\_
 103
 90\_**

Subtracting 90 from 103 gives the following answer, placed under the line, like this:

 \_\_**45\_R13\_
18 ) 823
 72\_\_
 103
 90\_
 13**

**or**

 \_\_**45\_13/18\_
18 ) 823
 72\_\_
 103
 90\_
 13**

The client can then read that 823 divided by 18 equals 45 with a remainder of 13, or that 823 divided by 18 equals 45 and 13/18ths.

 \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_\_\_ \_\_\_\_\_\_\_ \_\_\_\_\_\_\_
2 ) 4 3) 9 0) 5 4) 20 3) 15 3) 12

 \_\_\_\_\_\_ \_\_\_\_\_\_ \_\_\_\_\_\_ \_\_\_\_\_\_ \_\_\_\_\_\_\_ \_\_\_\_\_\_\_

6) 12 5) 30 6) 18 10) 10 10) 40 5) 25

 \_\_\_\_\_\_ \_\_\_\_\_\_\_ \_\_\_\_\_\_ \_\_\_\_\_\_\_ \_\_\_\_\_\_\_ \_\_\_\_\_\_\_

3) 21 4) 48 6) 36 0) 22 1) 40 2) 12

 \_\_\_\_\_\_ \_\_\_\_\_\_\_ \_\_\_\_\_\_\_ \_\_\_\_\_\_\_ \_\_\_\_\_\_\_ \_\_\_\_\_\_\_

6) 42 7) 49 8) 24 6) 24 4) 16 3) 30

 \_\_\_\_\_\_ \_\_\_\_\_\_\_ \_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_ \_\_\_\_\_\_\_

2) 8 3) 12 5) 10 5) 20 6) 36 7) 14

 \_\_\_\_\_\_ \_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_ \_\_\_\_\_\_\_

11) 22 10) 100 8) 32 9) 81 7) 56 6) 42

 **\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**2 7 ) 3 4 7 8 3 2 ) 7 8 9 4 0 5 3 ) 7 5 0 2 7 6**

 **\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**2 4 ) 5 8 7 3 9 1 6 ) 8 4 5 2 7 3 3 ) 7 2 4 6 8 9**

 **\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_**

**7 6 ) 6 6 6 2 4 4 4 ) 9 4 3 8 8 7 6 ) 3 2 4 9 6**

 **\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_**

**8 ) 3 4 6 4 5 ) 8 4 3 5 4 ) 6 7 3 2 0 3 ) 6 7 4 1**

 **\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_**

**7 ) 3 6 5 4 6 ) 2 7 8 5 2 2 ) 5 7 3 8 4 9 ) 4 8 7 8**

 **\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_**

**4 ) 5 5 1 6 5 ) 6 3 1 5 3 ) 7 8 2 4 7 ) 6 1 8 1**

 **\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_**

**8 ) 4 9 3 6 2 ) 4 5 4 8 6 ) 7 3 9 2 9 ) 7 5 8 1 6**