Division Unit Test Study Guide:

Dear Parents/Guardians,

We will be having our Math Division Unit test on _____. Students will be expected to
- ▸ Understand and demonstrate the relationship between multiplication and division
- ▸ Solve division problems with no remainder using related multiplication facts
- ▸ Solve division problems with 2 digits by 1 digit (with and without a remainder)
- ▸ Solve division problems with 3 digits by 1 digits (with and without a remainder)
- ▸ Solve word problems using division
- ▸ Know how to use an estimate to check your work in division

Please have them complete this study guide and return it by _____ for some Classroom Money.

Attached are some guides to help you practice.

Mrs. McIntyre & Mr. Ostapowich

Ex) $45 \div 9 =$ _____
_____ $\times 9 = 45$

1) $27 \div 3 =$ _____
_____ $\times 3 = 27$

2) $36 \div 9 =$ _____
_____ $\times 9 = 36$

3) $6 \div 2 =$ _____
_____ $\times 2 = 6$

4) $18 \div 9 =$ _____
_____ $\times 9 = 18$

5) $48 \div 8 =$ _____
_____ $\times 8 = 48$

6) $8 \div 4 =$ _____
_____ $\times 4 = 8$

7) $63 \div 7 =$ _____
_____ $\times 7 = 63$

8) $9 \div 1 =$ _____
_____ $\times 1 = 9$

9) $40 \div 8 =$ _____
_____ $\times 8 = 40$

10) $3 \div 1 =$ _____
_____ $\times 1 = 3$

11) $10 \div 2 =$ _____
_____ $\times 2 = 10$

12) Write a corresponding <u>multiplication</u> fact for the following:

a) $36 \div 9$ _____

b) $24 \div 4$ _____

c) $45 \div 9$ _____

13) Write a corresponding <u>division</u> fact for the following:

a) 7×5 _____

b) 6×8 _____

c) 4×9 _____

Division Worksheet

1 a.

$$7 \overline{)\ 5\ \ 6\ }$$

1 b.

$$5 \overline{)\ 2\ \ 0\ }$$

1 c.

$$6 \overline{)\ 5\ \ 4\ }$$

2 a.

$$7 \overline{)\ 4\ \ 9\ }$$

2 b.

$$5 \overline{)\ 3\ \ 0\ }$$

2 c.

$$3 \overline{)\ 2\ \ 4\ }$$

3 a.

$$2 \overline{)\ 2\ \ 0\ }$$

3 b.

$$6 \overline{)\ 1\ \ 2\ }$$

3 c.

$$8 \overline{)\ 6\ \ 4\ }$$

4 a.

$$6 \overline{)\ 6\ \ 0\ }$$

4 b.

$$3 \overline{)\ 2\ \ 7\ }$$

4 c.

$$4 \overline{)\ 2\ \ 0\ }$$

DEAD MONKEYS SMELL BAD
(D.M.S.B. aka Long Division)

Example

quotient

divisor → $3\overline{)72I}$ ← dividend

$$??$$

D - Divide
M - Multiply
S - Subtract
B - Bring Down

① Step One: Divide

$$3\overline{)72I}$$
$$2$$

We go only one digit at a time.

3 can go into **7** two times.
(Because 3x2=6, and 3x3=9, so three times is too many)
So we put our **2** above the 7.

Divide: Figure out how many times the **divisor** can go into the first digit of the **dividend**. Put your answer above.

② Step Two: Multiply

3 x 2 = 6, so we put the **6** below the 7 in the quotient.

$$3\overline{)72I}$$
$$2$$
$$6$$

Multiply: Multiply the **divisor** by the digit you just put into the **quotient**. Put the value under the first digit of the dividend.

③ Step Three: Subtract

7 - 6 = 1
So we put the 1 below.

$$3\overline{)72I}$$
$$2$$
$$-6$$
$$I$$

Subtract: Subtract the **product** you got (when you multiplied in step two) by the first digit in the **dividend**.
Place your answer below even if it's a 0.

④ Step Four: Bring Down

$$3\overline{)72I}$$
$$2$$
$$-6$$
$$I2$$

Bring the **2** down to make **12**.

Bring Down: Bring down the next digit in the **dividend**.

Then, prepare to REPEAT D.M.S.B. You will keep going through the steps until you have a remainder or are left with 0.

5. Step One (Again): Divide

```
  24
3)721
 -6
÷ 12
```

Don't worry about what has happened in the steps above, you are now focusing on your new number to divide.

3 can go into **12** four times.
(Because 3x4=12).
So we put our **4** above the number we brought down (the 2).

Divide: Figure out how many times the **divisor** can go into the number you got from your last step.

6. Step Two (Again): Multiply

Ignore this number when multiplying because we already multiplied with it.

```
    x  24
  3)721
   -6
    12
    12
```

3 x 4 = 12, so we put the 12 below the last step.

Multiply: Multiply the **divisor** by the digit you just put into the **quotient**. You will ignore the number before it because you already used it in a previous step. Put the value under the lowest numbers.

7. Step Three (Again): Subtract

```
   24
 3)721
  -6
   12
  -12
    0
```

12-12=0
So we put the 0 below.

Subtract: Subtract the **product** you got (when you multiplied in step two) by the number above it.
Place your answer below even if it's a 0.

8. Step Four (Again): Bring Down

```
   24
 3)721
  -6
   12
  -12
   01
```

Bring the **1** down. You only have **1** left to work with because your answer in the subtraction step was **0**.

Bring Down: Bring down the next digit in the **dividend.**

You'll need to REPEAT D.M.S.B one more time!

9 Step One (Again): Divide

```
    240
  _____
3 ) 721
  - 6
    12
  - 12
    01
```

1 cannot be divided by our divisor of **3**, as one is smaller than three. I write a 0 in my **quotient** to show it could not divide in any times.

Divide: Look at your new number. Try to divide your new number by your **divisor**.

If you can't divide it, you need to put a **0** in your **quotient** to show you could not divide in any times.

If you can divide in, put the number of times in the **quotient** like you did in the last steps.

10 Step Two (Again): Multiply

Ignore the first two numbers of the quotient when multiplying because we already multiplied with them.

```
  X    240
     _____
   3 ) 721
     - 6
       12
     - 12
       01
        0
```

3 x 0 = 0, so we put the 0 below the last step.

Multiply: Multiply the **divisor** by the digit you just put into the **quotient**. You will ignore the numbers before because you already used them in a previous step. Put the value under the lowest numbers.

11 Step Three (Again): Subtract

```
    240
  _____
3 ) 721
  - 6
    12
  - 12
    01
  -  0
     1
```

1 - 0 = 1
So we put the 1 below.

Subtract: Subtract the **product** you got (when you multiplied in step two) by the number above it.
Place your answer below even if it's a 0.

12 Step Four (Again): Bring Down

```
    240 r 1
  _____
3 ) 721
  - 6
    12
  - 12
    01
  -  0
     1
```

I bring my remainder up from the bottom.

There is nothing left to bring down.

Bring Down: Check to see if there are any more numbers in the **dividend** to bring down.

If the remaining number is smaller than your **divisor**, you have a remainder. Put it next to the **quotient** with an "r".

Find each quotient and the remainder.

$4\overline{)27}$ $9\overline{)61}$ $1\overline{)42}$ $9\overline{)37}$ $4\overline{)71}$

Find each quotient.

$4\overline{)236}$ $5\overline{)165}$ $7\overline{)518}$ $6\overline{)516}$ $8\overline{)448}$

Find each quotient and the remainder.

$5\overline{)783}$ $6\overline{)719}$ $9\overline{)296}$ $9\overline{)917}$ $2\overline{)158}$

Word Problems

1) Tom goes fishing with Mike. They catch 8 trout.
If they equally split up the trout, how may will each one get ?   _____

2) There were a total of 12 baseball games during the three month season.
If the games are equally divided, how many baseball games are played a month ?   _____

3) Mike has 24 yellow balloons. He wants to give his six friends the same
number of yellow balloons, how many will each friend get ?   _____

4) Sam has 40 cents in his bank.
How many dimes does Sam have ?   _____

5) Mike goes out to lunch with Keith and Dan. The total bill came to 15 dollars.
They decided to equally split up the bill, how much will each person have to pay ?   _____
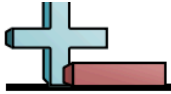
6) Fred has 20 dollars in five dollar bills. How many five dollars bills does
he have ?   _____

7) Sandy worked 20 hours in the last five days. Assuming that she worked the
same amount of hours each day, how long did she work each day ?   _____

8) Melanie, Sally, and Keith have 12 pencils all together.
If the pencils are equally divided, how many will each person get ?   _____

9) A restaurant sold 28 salads last week.
How many salads on average were sold each day ?   _____

10) Benny was at the beach for five days and found 16 seashells.
He plans to give all of his seashells equally to his four friends.
How many seashells will each friend get ?   _____

Name:

Solve each problem.

1) While playing at the arcade, Paul won thirty-nine tickets playing 'whack a mole' and fifteen tickets playing 'skee ball'. If he was trying to buy candy that cost nine tickets a piece, how many could he buy?

2) Vanessa was making baggies of cookies with six cookies in each bag. If she had twenty-five chocolate chip cookies and twenty-nine oatmeal cookies, how many baggies could she make?

3) For homework Sarah had seventeen math problems and twenty-eight spelling problems. If she can finish five problems in an hour how long will it take her to finish all the problems?

4) Isabel uploaded eleven pictures from her phone and seven from her camera to Facebook. If she sorted the pics into nine different albums with the same amount of pics in each album, how many pictures were in each of the albums?

5) A group of nine friends went into a restaurant. The chef already had thirty-four chicken wings cooked but cooked eleven more for the group. If they each got the same amount how many would each person get?

14) How do you estimate to check your work? Solve the following questions for the actual answers, then use an estimation strategy to check that your answer is reasonable.

a) Actual:
391 ÷ 5

Estimate:

☐ My Answer is Reasonable
☐ My Answer is **not** Reasonable

a) Actual:
264 ÷ 7

Estimate:

☐ My Answer is Reasonable
☐ My Answer is **not** Reasonable