

Long Division \div

Week 17 Homework

NAME KEY
DATE ^(Tue) Monday 12/16/19

Explain why it is important to correctly line up numbers according to their place value when doing a division problem.

It is important to line up numbers correctly according to their place value when doing a division problem because

Show Ms. N!

Complete sentences correct capitalization punctuation and spelling

Remember 4 parts of an equation:
* Given, operation, equals sign, unknown

Word Problems ^{# Annotate!} _(add notes/markings)

1. The 6 boys in Ms. Dreyvus' class always ran together during recess. By the end of the year, they had walked a total of 192 miles. If they each ran the same number of miles, how many did each boy run? $192 \div 6 = m$

$$\begin{array}{r} 32 \\ 6 \overline{) 192} \\ \underline{-18} \\ 12 \\ \underline{-12} \\ 0 \end{array}$$

Each boy ran 32 miles.

check:

$$\begin{array}{r} 32 \\ \times 6 \\ \hline 192 \end{array}$$

2. The brunch buffet cost the same for each adult. For the family of 8, the total cost was \$272. How much did it cost per person?

$$\begin{array}{r} 34 \\ 8 \overline{) 272} \\ \underline{-24} \\ 32 \\ \underline{-32} \\ 0 \end{array}$$

It cost \$34 per person

check:

$$\begin{array}{r} 34 \\ \times 8 \\ \hline 272 \end{array}$$

3. One Direction traveled from Phoenix, Arizona to Orlando, Florida on a first class airplane. The total cost for the 5 plane tickets was \$2,260. How much was each plane ticket?

$$\begin{array}{r} 452 \\ 5 \overline{) 2260} \\ \underline{-20} \\ 26 \\ \underline{-25} \\ 10 \\ \underline{-10} \\ 0 \end{array}$$

Each plane ticket was \$452

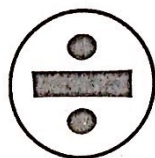
check:

$$\begin{array}{r} 452 \\ \times 5 \\ \hline 2260 \end{array}$$

4. Write and solve a word problem that requires long division.

Show Ms. N!

Long Division



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Find and explain the error in the division problem below.
Redo the problem correctly. Show Ms. N!

Correct Solution:

$$\begin{array}{r} 23 \text{ R} 3 \\ 4 \overline{) 95} \\ \underline{-8} \\ 15 \\ \underline{-12} \\ 3 \end{array}$$

$$\begin{array}{r} 21 \\ 4 \overline{) 95} \end{array}$$

Ideas may include:

- Did not follow steps of algorithm
- Did not subtract 8 from tens place
- Divided $9 \div 4$ and $5 \div 4$ separately
- or something else!

BONUS!

Word Problems Part 2 BONUS!

1. Necklace Maker Nancy uses 32 beads for each necklace she makes. Her latest shipment of beads had 1,799 beads in it. How many necklaces can she make?

$$\begin{array}{r} 56 \text{ R} 7 \\ 32 \overline{) 1799} \\ \underline{-160} \\ 199 \\ \underline{-192} \\ 7 \end{array}$$

$$1799 \div 32 = 56 \text{ R} 7$$

Nancy can make 56 necklaces

Check

$$\begin{array}{r} 56 \\ \times 32 \\ \hline 112 \\ +1680 \\ \hline 1792 \\ +7 \\ \hline 1799 \end{array}$$

2. Ms. Jones buys a package of pumpkin erasers to give her students. There are 988 erasers in the package, and she has 27 students in her class. If she splits them evenly, how many will each student get?

$$\begin{array}{r} 36 \text{ R} 16 \\ 27 \overline{) 988} \\ \underline{-81} \\ 178 \\ \underline{-162} \\ 16 \end{array}$$

$$988 \div 27 = 36 \text{ R} 16$$

Each student will get 36 erasers

Check

$$\begin{array}{r} 36 \\ \times 27 \\ \hline 252 \\ +720 \\ \hline 972 \\ +16 \\ \hline 988 \end{array}$$

3. From New York, NY to Cancun, Mexico it is 3,396 miles. If the family goes on a road trip and drives the same number of miles each for 12 days, how many miles will they drive each day?

$$\begin{array}{r} 283 \\ 12 \overline{) 3396} \\ \underline{-24} \\ 99 \\ \underline{-96} \\ 36 \\ \underline{-36} \\ 0 \end{array}$$

The family will drive 283 miles each day

Check

$$\begin{array}{r} 283 \\ \times 12 \\ \hline 566 \\ +2880 \\ \hline 3396 \end{array}$$

4. Jordan is making gifts for volunteers and orders 4,580 personalized M&Ms. She puts 34 M&Ms in each gift. How many gifts can she make?

$$\begin{array}{r} 134 \text{ R} 24 \\ 34 \overline{) 4580} \\ \underline{-34} \\ 118 \\ \underline{-102} \\ 160 \\ \underline{-136} \\ 24 \end{array}$$

$$4,580 \div 34 = 134 \text{ R} 24$$

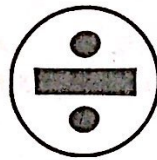
Jordan can make 134 gifts

Check

$$\begin{array}{r} 134 \\ \times 34 \\ \hline 536 \\ +4020 \\ \hline 4556 \\ +24 \\ \hline 4580 \end{array}$$

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Solve the problem and EXPLAIN what the remainder represents in the problem below.

Clara the Cupcake Maker had 53 cups of sugar. She uses 3 cups of sugar for each batch of cupcakes. How many batches of cupcakes can she make?

Solve

$$\begin{array}{r} 17R2 \\ 3 \overline{)53} \\ \underline{-30} \\ 23 \\ \underline{-21} \\ 2 \end{array}$$

check

$$\begin{array}{r} 17 \\ \times 3 \\ \hline 51 \\ + 2 \\ \hline 53 \end{array}$$

Explain (complete sentence!)

Clara can make 17 batches of cupcakes because the remaining 2 cups of sugar is not enough for another batch.

Challenge Word Problems

(1 foot = 12 inches)

1. A 747 Airplane is 762 inches tall. How tall is it in feet?

$$\begin{array}{r} 63R6 \\ 12 \overline{)762} \\ \underline{-120} \\ 42 \\ \underline{-36} \\ 6 \end{array}$$

The airplane is 63 feet 6 inches

OR 63 $\frac{1}{2}$ feet tall.

check

$$\begin{array}{r} 63 \\ \times 12 \\ \hline 126 \\ + 630 \\ \hline 756 \\ + 6 \\ \hline 762 \end{array}$$

2. The river raft ride at the amusement park can hold 12 riders at a time. There are 527 people in line. How many times will the ride need to run in order to get all 527 people through the ride?

$$\begin{array}{r} 43R11 \\ 12 \overline{)527} \\ \underline{-48} \\ 47 \\ \underline{-36} \\ 11 \end{array}$$

527 ÷ 12 = 43 R 11
The ride needs to run 44 times for all 527 people.

check

$$\begin{array}{r} 43 \\ \times 12 \\ \hline 86 \\ + 430 \\ \hline 516 \\ + 11 \\ \hline 527 \end{array}$$

3. One school bus can hold 46 students. There are 29 students in each of the 5 fifth grade classes. How many buses will they need in order to transport everyone to the zoo for a field trip?

Bonus!

$$\begin{array}{r} 429 \\ \times 5 \\ \hline 145 \end{array}$$

145 students total

$$\begin{array}{r} 4 \\ 46 \overline{)145} \\ \underline{-138} \\ 7 \end{array}$$

They will need 4 buses.

check

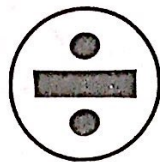
$$\begin{array}{r} 46 \\ \times 3 \\ \hline 138 \\ + 7 \\ \hline 145 \end{array}$$

4. Write and solve a word problem that requires long division AND has a remainder.

Show Ms. N!

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1-digit Divisors

Problem	Solve	Check
One hundred thirty two divided by four	$\begin{array}{r} 33 \\ 4 \overline{)132} \\ \underline{12} \\ 12 \\ \underline{12} \\ 0 \end{array}$ (33)	$\begin{array}{r} 33 \\ \times 4 \\ \hline 132 \end{array}$
$1,255 \div 5$	$\begin{array}{r} 251 \\ 5 \overline{)1255} \\ \underline{10} \\ 25 \\ \underline{25} \\ 05 \\ \underline{05} \\ 0 \end{array}$ (251)	$\begin{array}{r} 251 \\ \times 5 \\ \hline 1255 \end{array}$
Seven hundred fifty seven divided by six	$\begin{array}{r} 126 \text{ R } 1 \\ 6 \overline{)757} \\ \underline{6} \\ 15 \\ \underline{12} \\ 37 \\ \underline{36} \\ 1 \end{array}$ (126R1)	$\begin{array}{r} 126 \\ \times 6 \\ \hline 756 \\ + 1 \\ \hline 757 \end{array}$

BONUS!!

2-digit Divisors

BONUS!!

Problem	Solve	Check
Six hundred seventy two divided by thirty seven	$\begin{array}{r} 18 \text{ R } 6 \\ 37 \overline{)672} \\ \underline{37} \\ 302 \\ \underline{296} \\ 6 \end{array}$ (18R6)	$\begin{array}{r} 18 \\ \times 37 \\ \hline 126 \\ + 540 \\ \hline 666 \\ + 6 \\ \hline 672 \end{array}$
$5,147 \div 22$	$\begin{array}{r} 233 \text{ R } 21 \\ 22 \overline{)5147} \\ \underline{44} \\ 74 \\ \underline{66} \\ 87 \\ \underline{66} \\ 21 \end{array}$ (233R21)	$\begin{array}{r} 233 \\ \times 22 \\ \hline 466 \\ + 4660 \\ \hline 5126 \\ + 21 \\ \hline 5147 \end{array}$
One hundred seventy three divided by fourteen	$\begin{array}{r} 12 \text{ R } 5 \\ 14 \overline{)173} \\ \underline{28} \\ 33 \\ \underline{28} \\ 5 \end{array}$ (12R5)	$\begin{array}{r} 12 \\ \times 14 \\ \hline 48 \\ + 120 \\ \hline 168 \\ + 5 \\ \hline 173 \end{array}$