

DIVIDE WITH SUMS!



WRITING THE SUM

$50 \div 5$ is like saying,
“How many 5s in 50?”

We can draw a little house or ‘bus stop’
around the 50, then put the 5 next to it

$$5 \overline{) 50}$$

“How many 5s in 50?”

Write the answer above the line:

$$\begin{array}{r} 10 \\ 5 \overline{) 50} \end{array}$$



DIVIDE THE TENS AND ONES

If you have a large number to divide,
you can divide the
TENS AND ONES in a 'bus stop' sum

Let us think about $84 \div 4$
"How many 4s in 84?"

DRAW A 'BUS STOP' SHAPE
AROUND THE BIGGER NUMBER

First the tens:

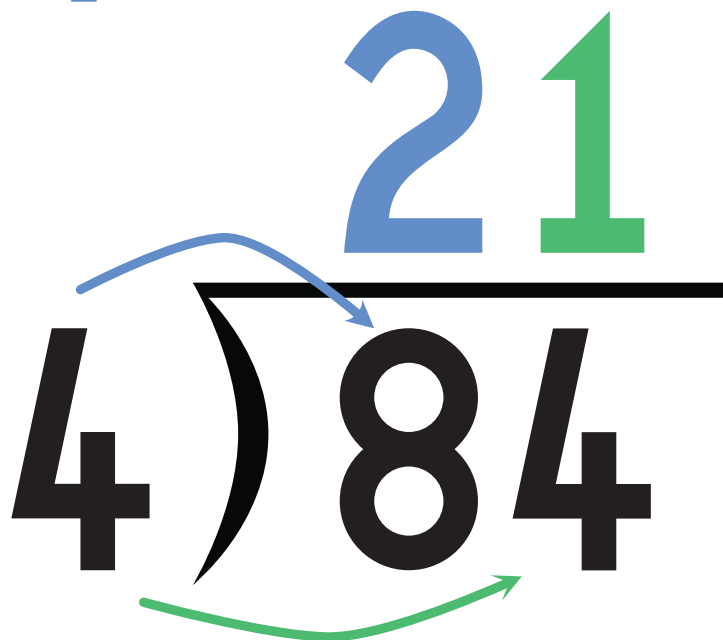
How many 4s in 8?

→ 2

Then the ones:

How many 4s in 4?

→ 1



DIVIDE SUMS 1



$$3 \overline{) 93}$$

$$3 \overline{) 66}$$

$$4 \overline{) 88}$$

$$4 \overline{) 80}$$

$$5 \overline{) 55}$$

$$5 \overline{) 50}$$

$$2 \overline{) 68}$$

$$2 \overline{) 86}$$



MOVING TO THE NEXT COLUMN

If you have a longer number,
move to the next column and divide again

$$\begin{array}{r} 312 \\ 3 \overline{) 936} \end{array}$$

DIVIDE SUMS 2

$$3 \overline{) 636}$$

$$3 \overline{) 900}$$

$$4 \overline{) 484}$$

$$2 \overline{) 462}$$



JOIN UP COLUMNS

Sometimes a large number is made up of smaller digits that can't be divided into, so join it up to the next column to make a 2-digit number that is big enough to divide into.

$$\begin{array}{r} 42 \\ 3 \overline{) 126} \end{array}$$

The diagram shows a long division problem. The divisor is 3, and the dividend is 126. The quotient 42 is written above the dividend. A blue arrow points from the 3 to the 1, and another blue arrow points from the 3 to the 12. A blue bracket is drawn under the 12. A blue bracket is also drawn under the 6.

HOW MANY 3s IN 1?

It won't go!

So move to the next column and join it up to make a number big enough.

HOW MANY 3s in 12?

4 → write 4 above and move to the next number.

HOW MANY 3s IN 6?

2 → write that above and the sum is finished!

$$126 \div 3 = 42$$



DIVIDE SUMS 3

$$3 \overline{) 156}$$

$$3 \overline{) 183}$$

$$4 \overline{) 128}$$

$$4 \overline{) 208}$$

$$2 \overline{) 146}$$

$$2 \overline{) 164}$$

$$5 \overline{) 350}$$

$$5 \overline{) 205}$$



PLACE A ZERO WHEN JOINING UP COLUMNS

Here is a sum we did last lesson:

$$\begin{array}{r} 42 \\ 3 \overline{) 126} \end{array}$$

We did not have to place a zero at the beginning of a number, but we could have!

$$\begin{array}{r} 042 \\ 3 \overline{) 126} \end{array}$$

If there is a small number to join up in the middle or end of the sum, we have to add the zero when we move columns:

$$\begin{array}{r} 207 \\ 3 \overline{) 621} \end{array}$$

HOW MANY 3s IN 6?

2 → write 2 above

HOW MANY 3s IN 2?

It wont go,

join with next column..

HOW MANY 3s in 21?

7 →

We cover 2 digits so write

07 above 21

$621 \div 3 = 207$ (not 27)



DIVIDE SUMS 4

$$3 \overline{) 621}$$

$$3 \overline{) 903}$$

$$4 \overline{) 820}$$

$$4 \overline{) 2020}$$

$$2 \overline{) 614}$$

$$2 \overline{) 4218}$$

$$5 \overline{) 525}$$

$$5 \overline{) 2015}$$



REMAINDERS AT THE END

Sometimes a big number does not exactly divide into what we divide it by, so there might be one or more left over, or a remainder.

$$\begin{array}{r} 104r1 \\ 5 \overline{) 521} \end{array}$$

HOW MANY 5s IN 5?

5 → write 1 above

HOW MANY 5s IN 2?

It won't go,

join with next column..

HOW MANY 5s in 21?

4 remainder 1→

We cover 2 digits so write

04 above 21 then r1

$$521 \div 5 = 104 \text{ r}1$$



DIVIDE SUMS 5

$$3 \overline{) 334}$$

$$3 \overline{) 901}$$

$$4 \overline{) 482}$$

$$4 \overline{) 2021}$$

$$2 \overline{) 611}$$

$$2 \overline{) 8247}$$

$$5 \overline{) 522}$$

$$5 \overline{) 2504}$$



CARRY REMAINDERS IN THE MIDDLE

Last lesson we had dividing sums with remainders!

What if in the middle of our sum there is a remainder?

$$\begin{array}{r} 131 \\ 5 \overline{) 655} \end{array}$$

HOW MANY 5s IN 6?

1 remainder 1 →

write 1 above

As the remainder 1 is one column left (10×), we can place it in a tens column with the next number as shown

HOW MANY 5s IN 15?

3 → write that above

HOW MANY 5s in 5?

1 → write that above

$$655 \div 5 = 131$$



DIVIDE SUMS 6

$$3 \overline{) 423}$$

$$3 \overline{) 516}$$

$$4 \overline{) 560}$$

$$4 \overline{) 5264}$$

$$2 \overline{) 742}$$

$$2 \overline{) 5240}$$

$$5 \overline{) 610}$$

$$5 \overline{) 7505}$$