## HANDY MATH



Here are some math problems in handy math. What do you notice about them? Circle the problems that are different from regular math.

| $1+0=1$ | $4+4=13$ | $4-3=1$ |
| :--- | :--- | :--- |
| $1+1=2$ | $10-1=4$ | $12+2=14$ |
| $3+1=4$ | $2+2=4$ | $4-1=3$ |
| $3+3=11$ | $20-4=11$ | $12-4=3$ |

I noticed that...

COUNTING OUT LOUD IN HANDY MATH: One, two, three, four, hand, handy-one, handy-two, handy-three, handy-four, two-hand, two-handyone, two-handy-two...

Question: How many blocks is this in Handy Math?


Answer: 12 (pronounced handy-two)


1 hand and 2 left-over fingers
so we write 1 in the "hands" column and 2 in the "fingers" column: 12.

Most people call handy math "base five." And they call regular math "base ten." Why do you think we use base 10 (and not base 5 , base 8 , base 20 , or something else)?

|  | How many hands? | How many leftover fingers? | Write as a 2-digit problem in handy math |
| :---: | :---: | :---: | :---: |
| +++++4+++++ | 2 | 0 | 20 |
| + + + |  |  |  |
| + + + + + + |  |  |  |
| + + + + + + + |  |  |  |
| $\begin{aligned} & ++++++++++ \\ & ++ \end{aligned}$ |  |  |  |
| $\begin{aligned} & ++++++++++ \\ & +++++++++ \end{aligned}$ |  |  |  |
| $\begin{aligned} & ++++++++++ \\ & ++++ \end{aligned}$ |  |  |  |

How many legs does the cat have in regular math? $\qquad$ In handy math? $\qquad$


How many legs does the insect have in regular math? $\qquad$ In handy math? $\qquad$


How many legs does the spider have in regular math? $\qquad$ In handy math? $\qquad$


Write the answer to these handy math problems:
$2+2=$ $\qquad$ $12+4=$ $\qquad$
$3+2=$ $\qquad$ $21+14=$ $\qquad$
$4+4=$ $\qquad$ $2 \times 3=$ $\qquad$
10-2 $=$ $\qquad$ $3 \times 11=$ $\qquad$
$11+3=$ $\qquad$ $3 \times 12=$ $\qquad$
13-3= $\qquad$ $11+11=$ $\qquad$

Write your own handy math problem. Make sure to use only 1- and 2-digit numbers. See if someone else can solve it.

What digits in regular math don't exist in handy math? $\qquad$

What is the biggest number you can write in 2 digits in handy math? $\qquad$

If you want to write bigger numbers, you can use three-digit handy math. The columns are:

- The HANDREDs column. Each handred is hand hands
- The HANDs column, and
- The FINGERS column

In regular math, the columns are:

- The HUNDREDS column. Each hundred is ten tens
- The TENS column, and
- The ONES column

The first space launch occurred almost 204 years (two hAndred four years) after the first airplane flight, in handy math.

How many years is that in regular math? $\qquad$

# CROSS-NUMBER PUZZLE I EVERYTHING (QUESTIONS AND ANSWERS) IS IN HANDY MATH 

| A | B |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
|  | C | D |  |  |
|  |  | E | F |  |
|  |  |  | G | H |
|  |  |  |  |  |

## Across

A. What number is considered unlucky? Be sure to write it in Handy Math!
C. What is $40-4$ ?
E. What is the biggest possible 2-digit number in handy math?
G. What is $3 \times 2$ ?

Down
B. How old do you have to be to vote in the US?
D. How many lives do cats have?
F. What is $23+13$ ?
H. Snow White and the $\qquad$ Dwarves

## CROSS-NUMBER PUZZLE II

## EVERYTHING (QUESTIONS AND ANSWERS) IS IN HANDY MATH

## ACROSS:

A. How many days are there in a week?
B. How many weeks are there in a year?
D. How many letters are there in the alphabet?
E. What is $22+20$ ?
F. How many legs does an insect have?

DOWN:
A. How many days are there in October?
B. What is $14+2$ ?
C. What is $111 \times 2$ ?
E. What is $21+20$ ?

| A |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
|  |  | B |  | C |
| D |  |  |  |  |
|  |  |  | E |  |
|  |  | F |  |  |

