

T-MF Math Fundamentals

Subtract 4 ^{switch} from the sum of 5 and 7

$$\boxed{(5+7) - 4}$$
$$12 - 4 = 8$$

5 more ⁺ than the product of 2 and 8

$$\boxed{5 + (2 * 8)}$$

$$5 + 16 = 21$$

8 ^{switch} less than the quotient of 20 and 2

$$\boxed{\left(\frac{20}{2}\right) - 8}$$
$$10 - 8 = 2$$

Find $\frac{1}{8}$ of 9 less than 13

$$\boxed{\frac{1}{8} * (13-9)}$$

or $\div 8$

$$(13-9) \div 8$$

$$4 \div 8 = \frac{1}{2}$$



\$20

half of

$\frac{1}{2}$ of

$$\frac{1}{2} * 20 \text{ or } 20 \div 2$$

7, 11, 15, 19, 23 ...
 $+4$ $+4$ $+4$ $+4$

pattern rule
 $(+4)$

10, 16, 22, 28, 34 ...
 $+6$ $+6$ $+6$ $+6$

$(+6)$

32, 16, 8, 4, ...
 $\div 2$ $\div 2$ $\div 2$

$(\div 2)$

9, 27, 81, 243, 729
 $\times 3$ $\times 3$ $\times 3$ $\times 3$

$(\times 3)$

1st 8
 2nd 16
 3rd 24
 4th 32

$\times 8$ 25th
 $\boxed{200}$

4 $\times 8$ 25
 $\frac{4 \times 25}{200}$

1 $\times 8$ 8
 2 $\times 8$ 16
 3 $\times 8$ 24
 4 $\times 8$ 32

1st 12
 2nd 24
 3rd 36
 4th 48

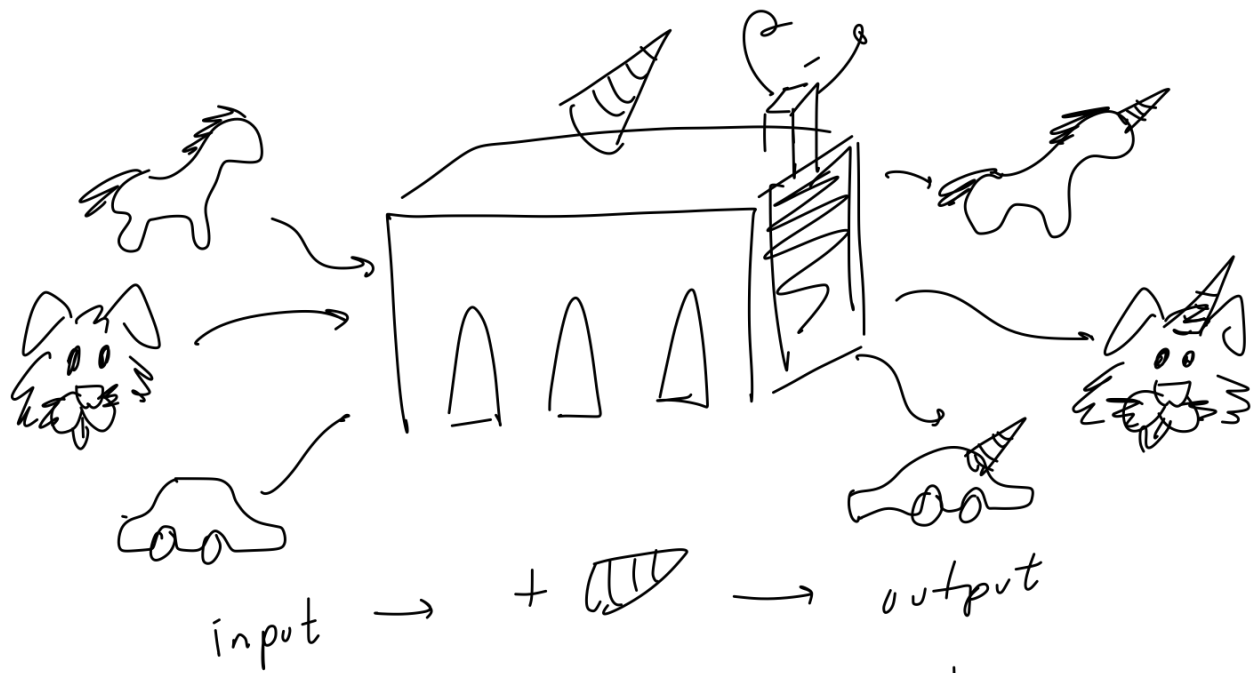
$\times 12$ 1 billionth
 $\boxed{12 \text{ billion}}$

Input 1 2 $\times 12$ 3 $\times 12$ 4 $\times 12$
 Out 12 24 36 48

$\frac{12}{4} = 3$

4 $\overline{) 48}$
 $\underline{48}$
 08
 $\underline{08}$
 0

~~4 \times 2 = 48~~



$$\text{input} + \text{[drawing of a pencil]} = \text{output}$$

Function Machines

input (j) output (k)

$$14 \xrightarrow{+18} 32$$

$$39 \xrightarrow{+18} 57$$

$$19 \xrightarrow{+18} 37$$

$$61 \xrightarrow{+18} 79$$

$$48 \xrightarrow{+18} 66$$

equation

$$j + 18 = k$$

3.)

Input (L)

Output (m)

4	$\xrightarrow{*10}$	40
2	$\xrightarrow{*10}$	20
5	$\xrightarrow{*10}$	50
10	$\xrightarrow{*10}$	100
6	$\xrightarrow{*10}$	60

Algebraic equation

$$L * 10 = m$$

Input (n)

Output (o)

97	$\xrightarrow{-6}$	91
19	$\xrightarrow{-6}$	13
41	$\xrightarrow{-6}$	35
23	$\xrightarrow{-6}$	17
78	$\xrightarrow{-6}$	72

$$n - 6 = o$$

in (f)	9	8	3	7
out (g)	54	48	18	42

$$f * 6 = g$$

$$6f = g$$

$$* 6$$

→

in (p)	$\xrightarrow{2} 14$	$\xrightarrow{10} 70$	$\xrightarrow{6} 42$	$\xrightarrow{9} 63$	$\xrightarrow{*7}$
out (q)	2	10	6	9	

$$p \div 7 = q$$

$$7q = p$$

input (L)	$\xrightarrow{10} 45$	$\xrightarrow{10} 53$	$\xrightarrow{10} 52$	$\xrightarrow{26} 26$
output (m)	35	43	42	16

$$L - 10 = m$$

$$633,235 = \underline{600,000} + \underline{30,000} + 3,000 + 200 + 30 + 5$$



6 0 0 0 0 0

Expanded form

$$97,382 = 90,000 + 7,000 + 300 + 80 + 2$$



Written form

¹³²
One hundred thirty-two

78 358
↑
thousand

seventy eight thousand three hundred
fifty eight.

89 718 342
↑ ↑
million thousand

eighty nine million
seven hundred eighteen thousand
three hundred forty-two.

Maryn

3,872,905

Three million eight hundred seventy two thousand nine hundred five.

Caroline

12,005,817

Twelve million five thousand eight hundred seventeen.

Emma

586,124

Five hundred eight six thousand, one hundred twenty four.

Code

4,806,007

Four million eight hundred and six thousand seven.

Will

8,998,112

eight million nine hundred ninety eight thousand one hundred twelve.

102,176,198

One hundred and two million, one hundred seventy-six thousand, one hundred ninety-eight.

Quiz 1 due tonight
Quiz 2 due Sep 29th

HW paper: 5-10

Online HW (Thurs)
Quiz 3 (Thurs) due Oct 6th