ADIO/ADDITION

1. Grwpio/grouping

5 +3=8

$$5 \quad + \quad 3 \quad = \quad (5 + 3) \quad = \quad 8$$

8 + 7 + 2=17

$$8 \quad + \quad 7 \quad + \quad 2 \quad = (8+2)+ \quad 7 \quad = \quad 10 \quad + \quad 7$$

$$= 17$$

2.Adio ar linell rhif/ Addition on a number line

8 + 2= 10

+ 8   + 2

```
   ∩  ∩  ∩  ∩  ∩  ∩  ∩  ∩  ∩  ∩
───┬──┬──┬──┬──┬──┬──┬──┬──┬──┬──→
   0  1  2  3  4  5  6  7  8  9  10
```

8 + 2= 10

+8   +2

```
      _____
     /                \    ___
────┬──┬──┬──┬──┬──┬──┬──┬─/─┬──┬──→
    0  1  2  3  4  5  6  7  8  9  10
```

28 + 35 = 63

+30   +5

28   58   63

149 + 26= 176

+20   +6
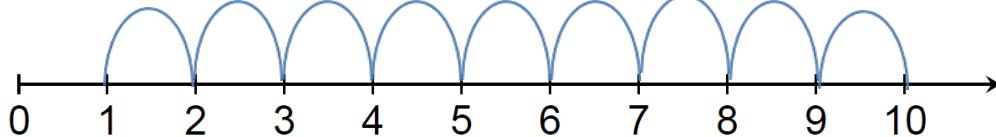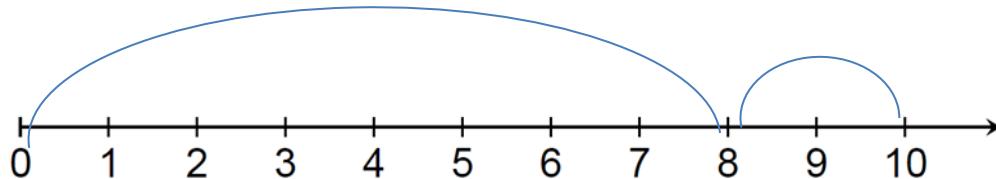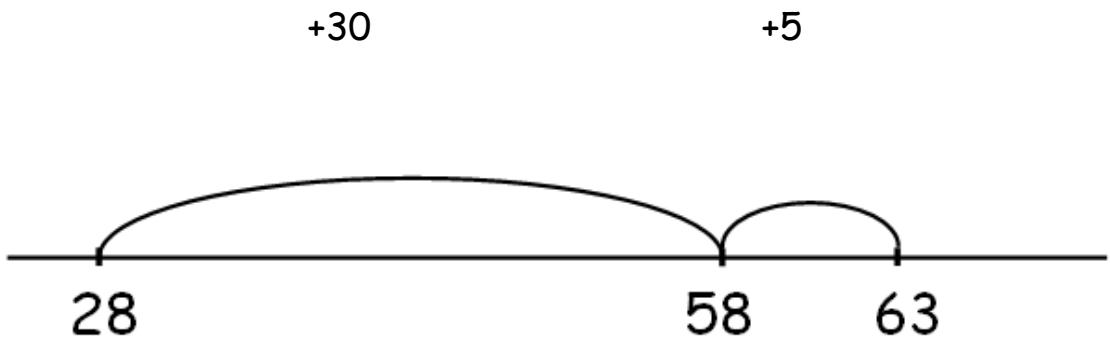
149   169   176
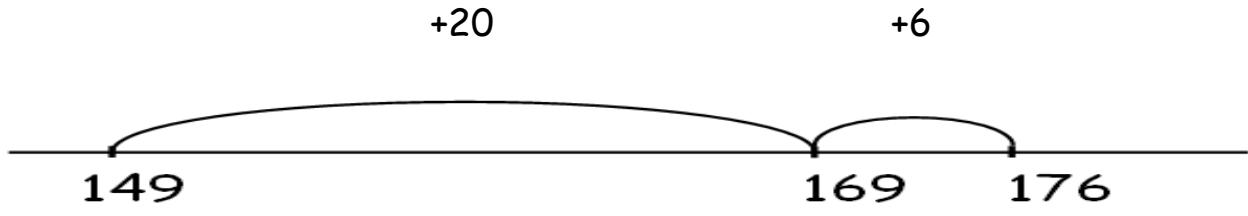
3. Adio colofnau/ vertical addition

	2	8
+	3	5
	5	0
	1	3
	6	3

| 20 | + | 8 |
| 30 | + | 5 |
| 20 + 30 = 50 |
| 8 + 5 = 1 3 |
| 50 + 10 + 3 |

	3	6	8
+	4	9	4
	7	0	0
	1	5	0
		1	2
	8	6	2

| 300 + 60 + 8 |
| 400 + 90 + 4 |
| 300 + 400 = 700 |
| 60 + 90 = 150 |
| 8 + 4 = 12 |

```
    5 . 6        [5▶]   +   [◀•6]

  + 2 . 8        [2▶]   +   [◀•8]
  ─────────
    1 . 4        [◀•6]  +  [◀•8]  =  [1▶][◀•4]

    7 . 0        [5▶]   +   [2▶]  =  [7▶]
  ─────────
    8 . 4
  ─────────
```

TYNNU/ SUBTRACTION


```
    8    -    3    =   (8 - 3)   =    5
```

1.Cyfri nôl/ counting back

8-3=5

-3

```
    ___  ___  ___
   /   \/   \/   \
←——|———|———|———|———|———|———|———|———|———|———|——→
   0   1   2   3   4   5   6   7   8   9   10
```
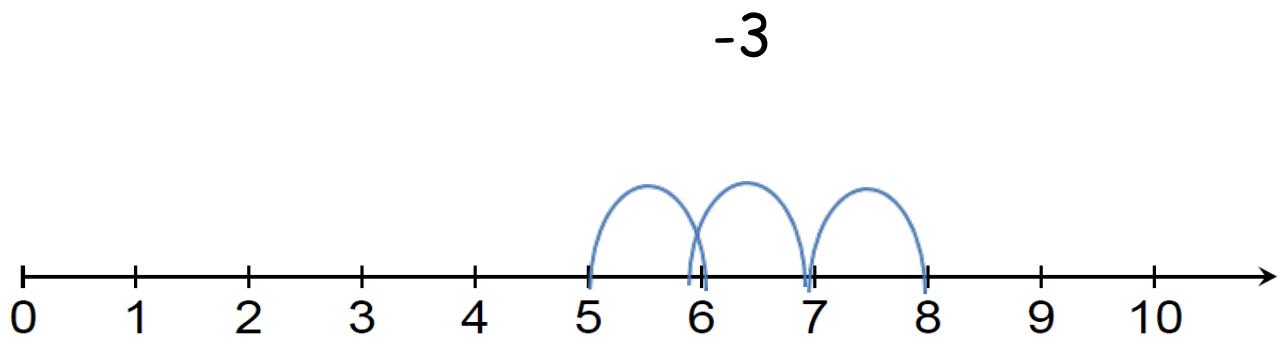
2.Dod o hyd i wahaniaeth/ finding the difference

8-3=5

```
      ___  ___  ___  ___  ___
     /   \/   \/   \/   \/   \
←——|———|———|———|———|———|———|———|———|———|———|——→
   0   1   2   3   4   5   6   7   8   9   10
```
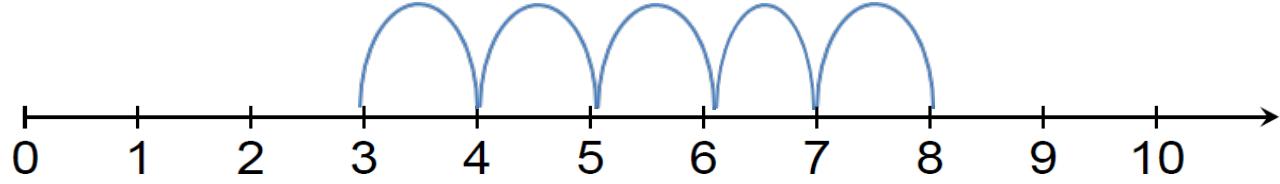
2.Tynnu gan adio ymlaen/ subtraction by counting on.

a.)72- 48=24

72 - 48 = [7|2]▷ - [4|8]▷
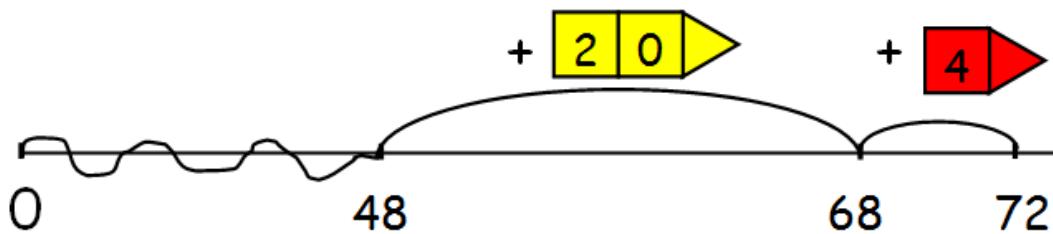
+[2|0]▷   +[4]▷

0   48   68   72

= [2|0]▷ + [4]▷

= [2|4]▷

b)

+[2]▷ +[2|0]▷ +[2]▷

48 50   70 72

```
   7 2
-  4 8
-------
     2   (50)
   2 0   (70)
     2   (72)
-------
   2 4
-------
```
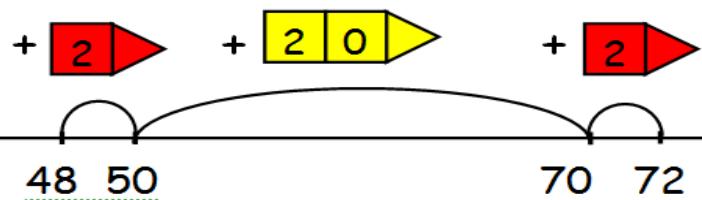
72 - 48 = 24	72 - 24 = 48
24 + 48 = 72	48 + 24 = 72

3.Tynnu gan ddefnyddio colofnau/ Column subtraction
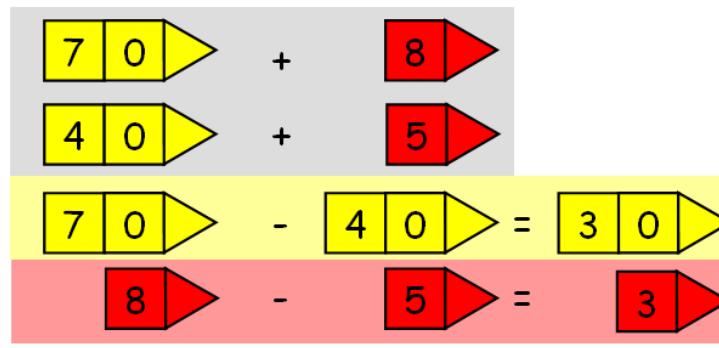
```
    7  8
-   4  5
  _____
    3  0
       3
  _____
    3  3
  _____
```

7 0	+	8		
4 0	+	5		
7 0	-	4 0	=	3 0
8	-	5	=	3

```
  8 4 2        [8|0|0] + [4|0] + [2]
- 2 7 6      - [2|0|0] + [7|0] + [6]
_____
```

```
                          [3|0]
  8 ³4̶ ¹2       [8|0|0] + [4̶|0̶] + [1|2]
- 2 7 6      - [2|0|0] + [7|0] + [6]
_____
```

```
               [7|0|0]   [1|3|0]
 ⁷8̶ ¹³4̶ ¹2     [8̶|0̶|0̶] + [4̶|0̶] + [1|2]
-  2 7 6     - [2|0|0] + [7|0] + [6]
_____
  5 6 6        [5|0|0] + [6|0] + [6]
```

9.3 - 3.6

+ [•|4]   + [5]   + [•|3]

3.6   4.0   9.0   9.3
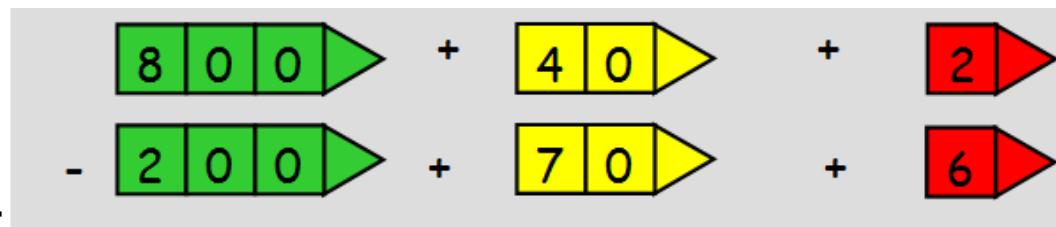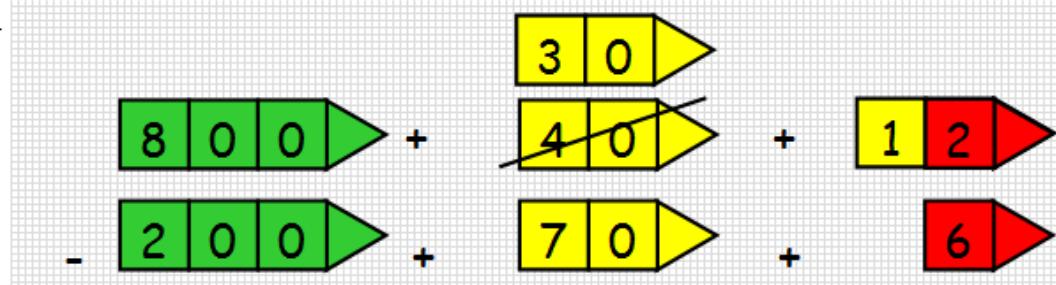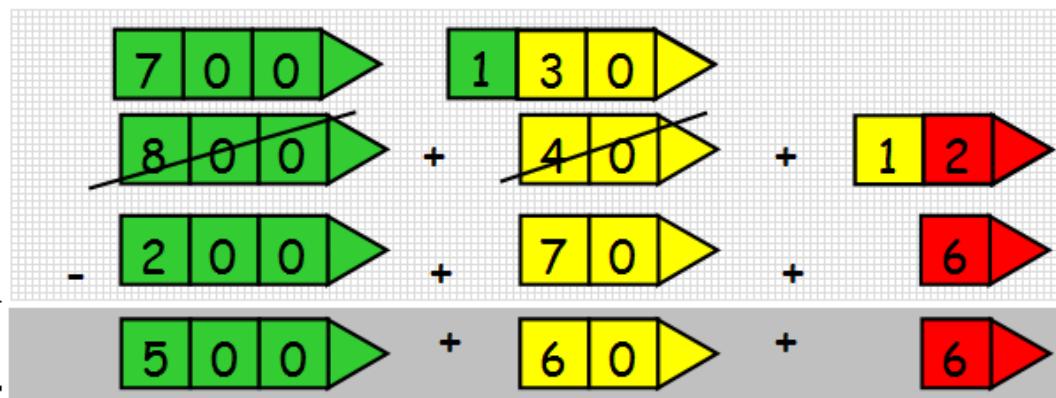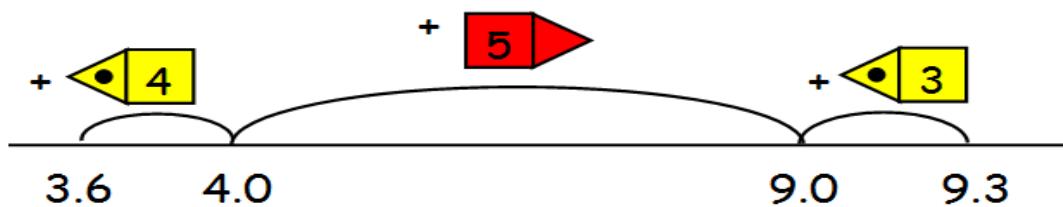
```
   9 . 4
 - 3 . 7
 _____
   0 . 4   (4.0)
   5 . 0   (9.0)
   0 . 3   (9.3)
 _____
   5 . 7
```

LLUOSI/MULTIPLICATION

Setiau/Sets of

5 + 5 + 5= 15

3 x5=15
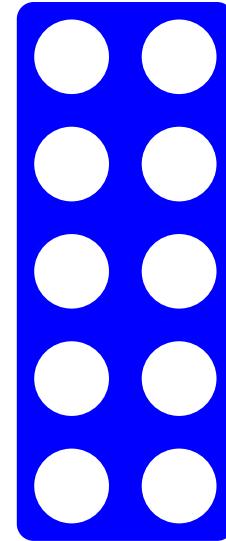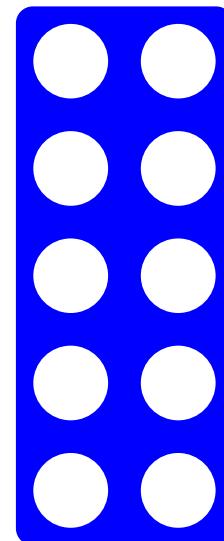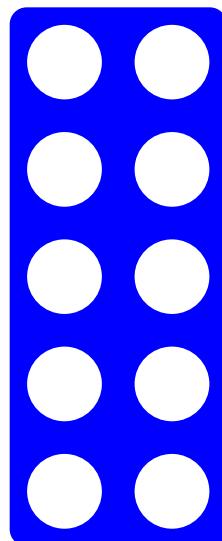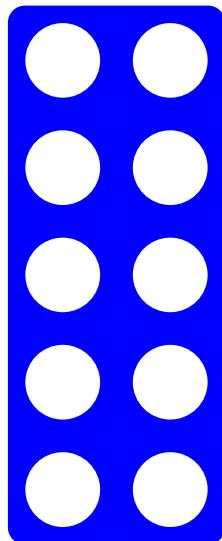
10 + 10 + 10 10= 40

4 x 10=40

23 × 8

2 × 10

×	**20**	**3**
8	160	24

8 × 2 × 10

8 × 3

	1	6	0
+		2	4
	1	8	4

23 × 8 = 184   8 × 23 = 184

184 ÷ 23 = 8   184 ÷ 8 = 23

---

346 × 9

4

3 × 100
neu
3 × 10 × 10

4 × 10

×	**300**	**40**	**6**
9	2700	360	54

9 × 3 × 100
neu
9 × 3 × 10 × 10

9 × 4 × 10

9 × 6

		3	4	6
×				9
			5	4
		3	6	0
	2	7	0	0
	3	1	1	4

346 × 9 = 3114   9 × 346 = 3114

3114 ÷ 346 = 9   3114 ÷ 9 = 346

6

56×27

2 × 10

5 × 10

5 × 10 × 7
neu
5 × 7 × 10

×	20	7
50	1000	350
6	120	42

5 × 10 × 2 × 10
neu
5 × 2 × 10 × 10

6 × 2 × 10

6 × 7

```
      5 6
  ×   2 7
      4 2
    3 5 0
    1 2 0
  1 0 0 0
  1 5 1 2
```

$56 \times 27 = 1512$	$27 \times 56 = 1512$
$1512 \div 56 = 27$	$1512 \div 27 = 56$

11

4.9×3

9 ÷ 10

(3 × 9) ÷ 10

×	4	0.9
3	12	2.7

3 × 4

```
    4 . 9
  ×     3
    2 . 7
  1 2 . 0
  1 4 . 7
```

$4.9 \times 3 = 14.7$	$3 \times 4.9 = 14.7$
$14.7 \div 4.9 = 3$	$14.7 \div 3 = 4.9$

RHANNU/DIVISON

$$20 \div 5 =$$

Felly, sawl 5 sydd mewn 20?

So, how many 5s in 20?

$$20 \div 5 = 4$$

$$18 \div 3 =$$

Felly, sawl 3 sydd mewn 18?

So, how many 3s in 18?
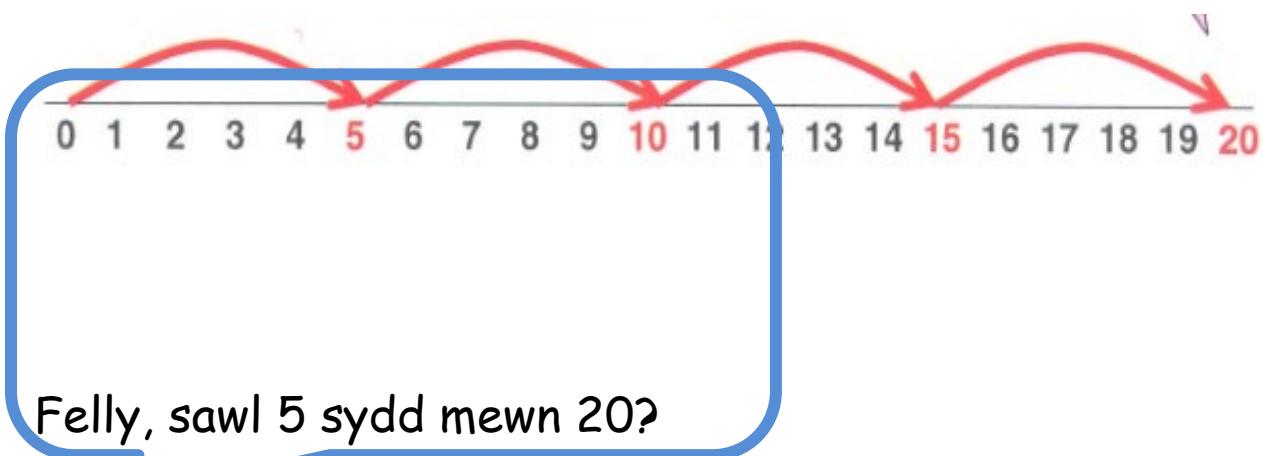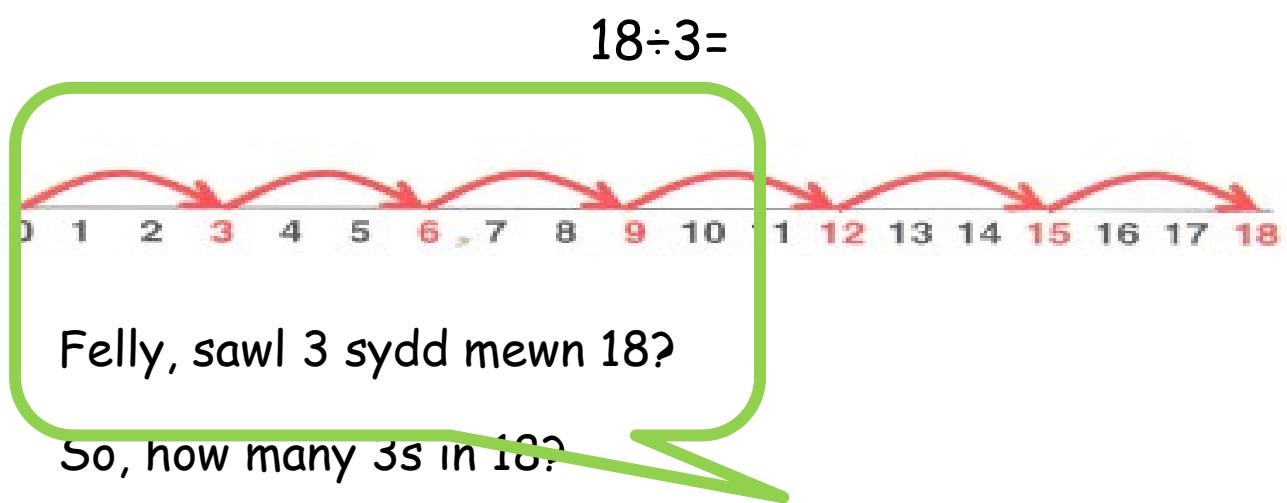
$$18 \div 3 = 6$$

$$17 \div 5 =$$
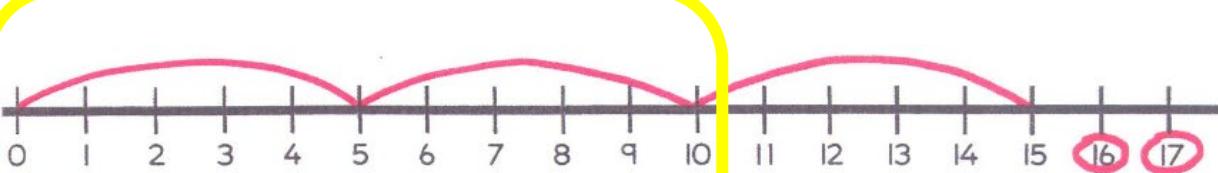
Felly, sawl 5 sydd mewn 17?

So, how many 5s in 17?

3 a gweddill 2

3 reminder 2

$$67 \div 6 =$$

Felly/so,

$$67 \div 6 = 11 \ g/r \ 1$$

69 ÷ 4

```
        1   7   gw. 1
    ┌─────────
  4 │ 6   9
    │-  4   0        10 × 4
    │─────────
    │   2   9
    │ - 2   0         5 × 4
    │   ─────────
    │       9
    │   -   8         2 × 4
    │   ─────────
    │       1
    │   ─────────
```

1	×	4	=		4
2	×	4	=		8
5	×	4	=	2	0
1	0	×	4	=	4	0

75 ÷ 5

```
        1   5
    ┌─────────
  5 │ 7   5
    │-  5   0        10 × 5
    │─────────
    │   2   5
    │ - 2   5         5 × 5
    │   ─────────
    │       0
    │   ─────────
```

1	×	5	=		5
2	×	5	=	1	0
5	×	5	=	2	5
1	0	×	5	=	5	0

75 ÷ 5 = 15	75 ÷ 15 = 5
15 × 5 = 75	5 × 15 = 75