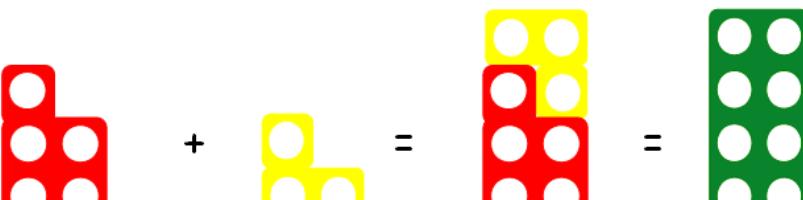


ADIO/ADDITION

1. Grwpio/grouping

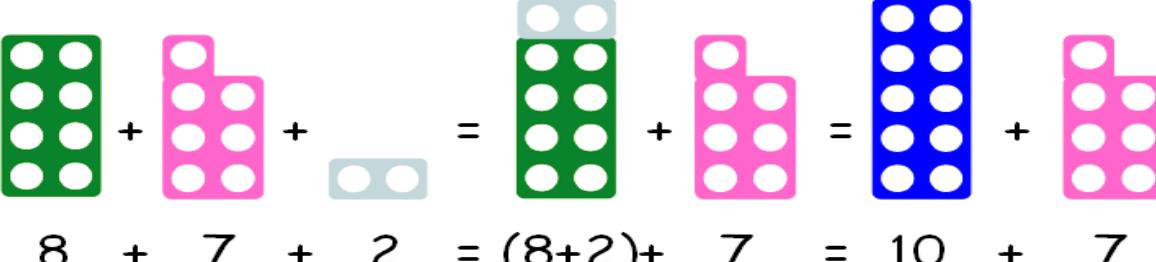
$$5 + 3 = 8$$



A diagram showing the addition of two groups of dots. On the left, there is a red 2x3 grid of dots labeled '5'. To its right is a plus sign. Next is a yellow 2x2 grid of dots labeled '3'. To the right of the plus sign is another plus sign. Then there is a red 2x4 grid of dots labeled '(5 + 3)'. To its right is an equals sign. Finally, there is a green 3x3 grid of dots labeled '8'.

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

$$8 + 7 + 2 = 17$$



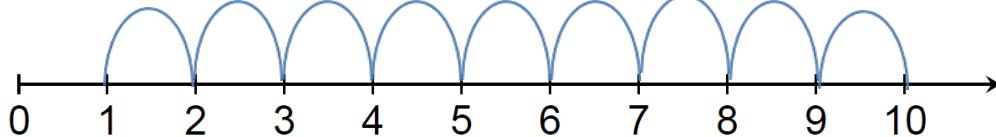
A diagram showing the addition of three groups of dots. On the left, there is a green 3x3 grid of dots labeled '8'. To its right is a plus sign. Next is a pink 2x4 grid of dots labeled '7'. To the right of the plus sign is another plus sign. Then there is a light blue 1x3 grid of dots labeled '2'. To its right is an equals sign. Next is a green 3x3 grid of dots labeled '(8+2)'. To its right is a plus sign. Next is a pink 2x4 grid of dots labeled '7'. To the right of the plus sign is another plus sign. Then there is a blue 3x3 grid of dots labeled '10'. To its right is a plus sign. Next is a pink 2x4 grid of dots labeled '7'. To the right of the plus sign is an equals sign. Finally, there is a blue 3x3 grid of dots labeled '17'.

$$8 + 7 + 2 = (8+2) + 7 = 10 + 7 = 17$$

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

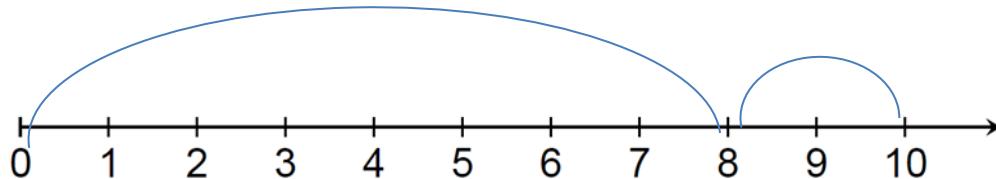
$$8 + 2 = 10$$

$$+ 8 \qquad \qquad + 2$$

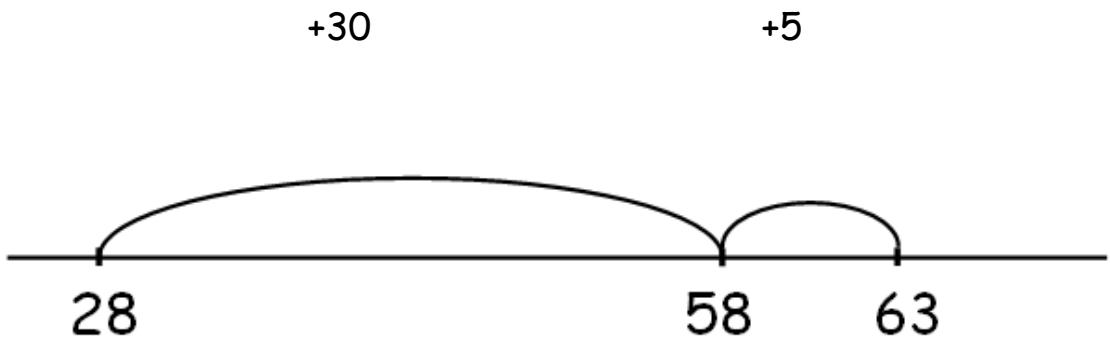


$$8 + 2 = 10$$

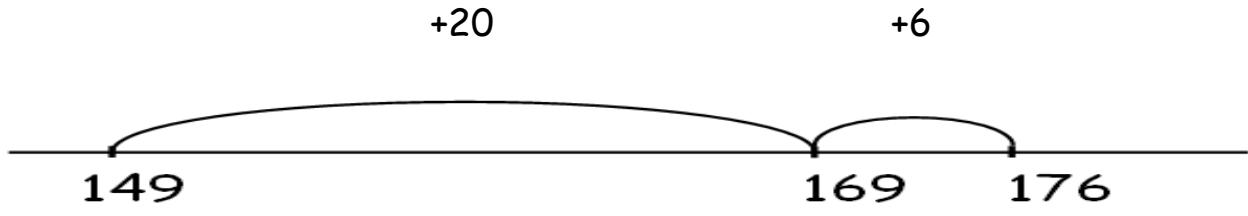
$$+8 \qquad \qquad +2$$



$$28 + 35 = 63$$

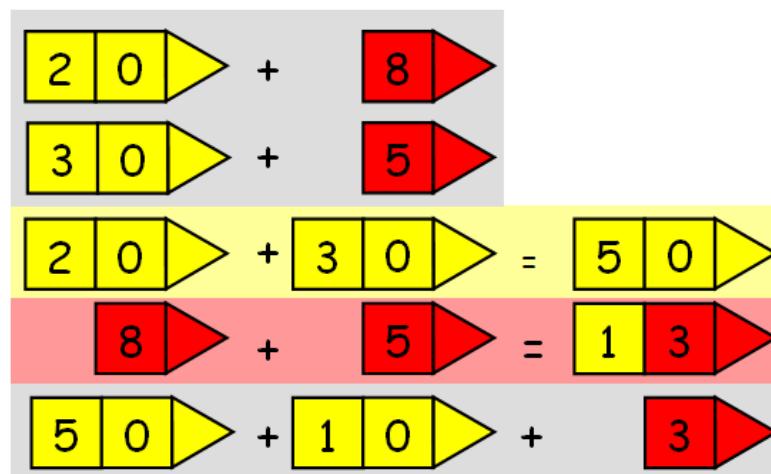


$$149 + 26 = 176$$

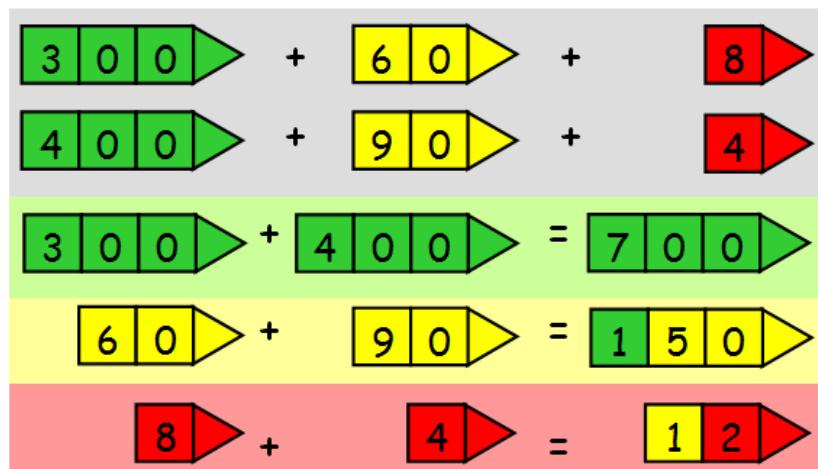


3. Adio colofnau/ vertical addition

$$\begin{array}{r}
 & 2 & 8 \\
 + & 3 & 5 \\
 \hline
 & 5 & 0 \\
 & 1 & 3 \\
 \hline
 & 6 & 3
 \end{array}$$



$$\begin{array}{r}
 & 3 & 6 & 8 \\
 + & 4 & 9 & 4 \\
 \hline
 & 7 & 0 & 0 \\
 & 1 & 5 & 0 \\
 & 1 & 2 \\
 \hline
 & 8 & 6 & 2
 \end{array}$$



$$\begin{array}{r}
 5 . 6 \\
 + 2 . 8 \\
 \hline
 1 . 4 \\
 7 . 0 \\
 \hline
 8 . 4
 \end{array}$$

The diagram shows the addition of 5.6 and 2.8. It uses red arrows for the integer parts (5 and 2) and yellow arrows for the decimal parts (.6 and .8). The sum 8.4 is shown as a red arrow.

	+		
	+		
		=	
		=	

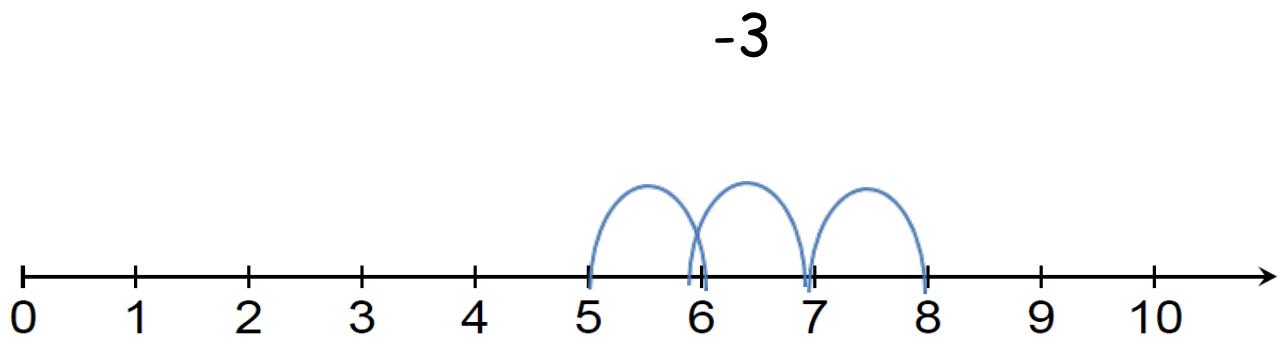
TYNNU/ SUBTRACTION

The diagram shows the subtraction of 3 from 8. It uses a green dot card for 8, a yellow dot card for 3, and a red dot card for 5. The result is shown as a red arrow.

	-		=		=	
8	-	3	=	$(8 - 3)$	=	5

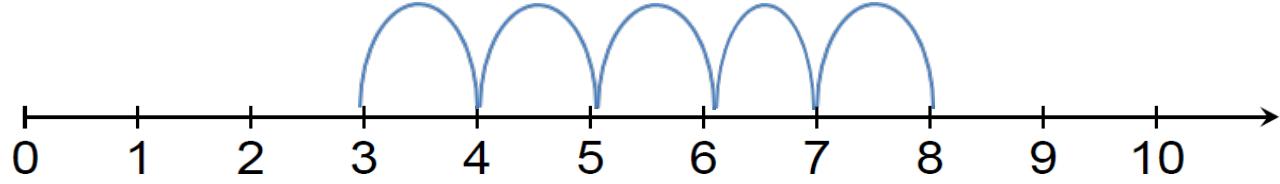
1.Cyfri nôl/ counting back

$$8-3=5$$



2.Dod o hyd i wahaniaeth/ finding the difference

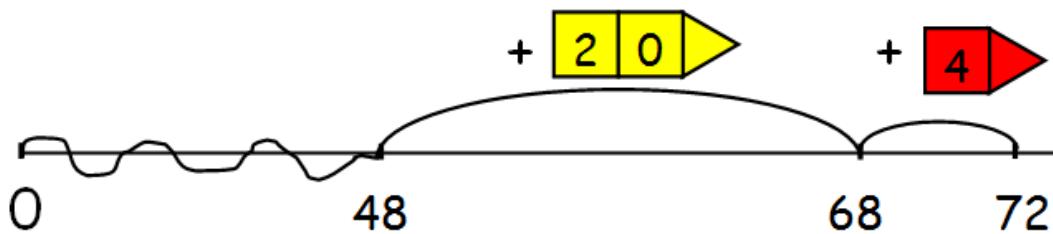
$$8-3=5$$



2. Tynnu gan adio ymlaen/ subtraction by counting on.

a.) $72 - 48 = 24$

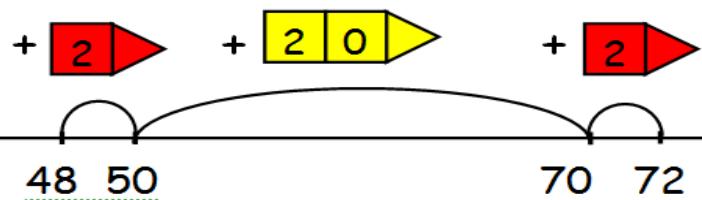
$$72 - 48 = \begin{array}{|c|c|}\hline 7 & 2 \\ \hline \end{array} - \begin{array}{|c|c|}\hline 4 & 8 \\ \hline \end{array}$$



$$= \begin{array}{|c|c|}\hline 2 & 0 \\ \hline \end{array} + \begin{array}{|c|}\hline 4 \\ \hline \end{array}$$

$$= \begin{array}{|c|c|}\hline 2 & 4 \\ \hline \end{array}$$

b)

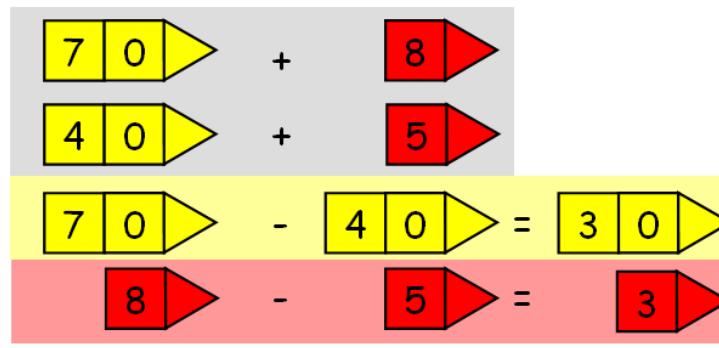


$$\begin{array}{r} 72 \\ - 48 \\ \hline 2 \quad (50) \\ 2 \quad (70) \\ 2 \quad (72) \\ \hline 2 \quad 4 \end{array}$$

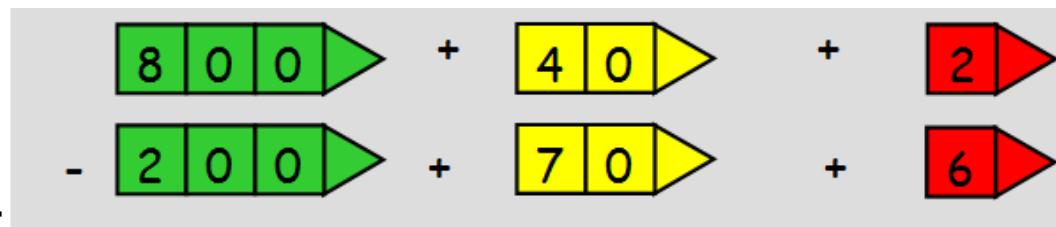
$72 - 48 = 24$	$72 - 24 = 48$
$24 + 48 = 72$	$48 + 24 = 72$

3. Tynnu gan ddefnyddio colofnau/ Column subtraction

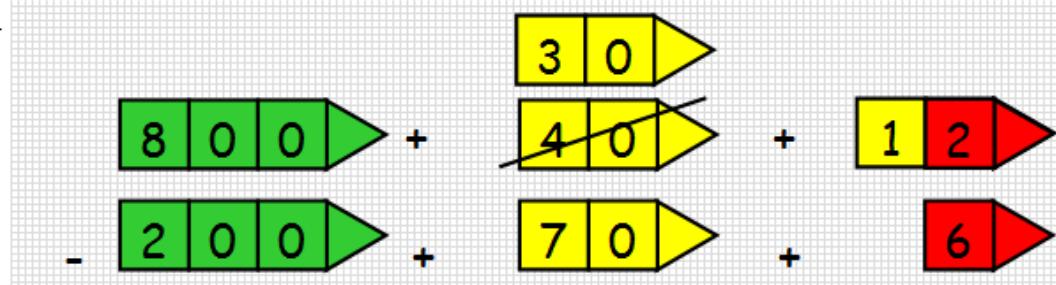
$$\begin{array}{r} 7 \ 8 \\ - 4 \ 5 \\ \hline 3 \ 0 \end{array}$$



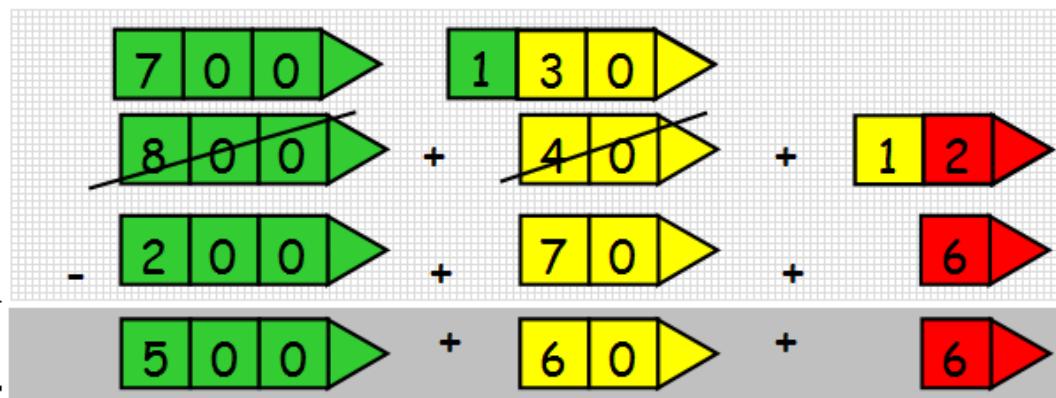
$$\begin{array}{r}
 842 \\
 -276 \\
 \hline
 \end{array}$$



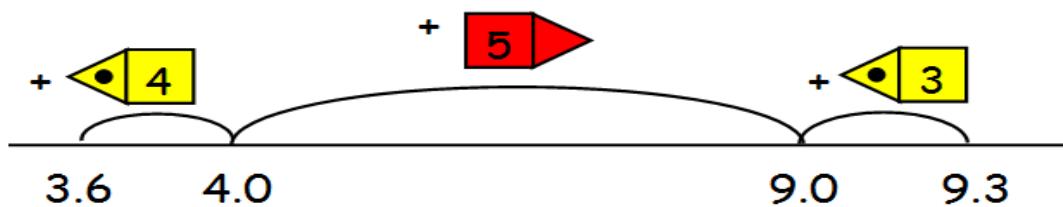
$$\begin{array}{r}
 8\cancel{4}12 \\
 -276 \\
 \hline
 \end{array}$$



$$\begin{array}{r}
 78\cancel{13}412 \\
 -276 \\
 \hline
 566
 \end{array}$$



$$9.3 - 3.6$$



$$\begin{array}{r}
 9.4 \\
 -3.7 \\
 \hline
 0.4 \quad (4.0) \\
 5.0 \quad (9.0) \\
 0.3 \quad (9.3) \\
 \hline
 5.7
 \end{array}$$

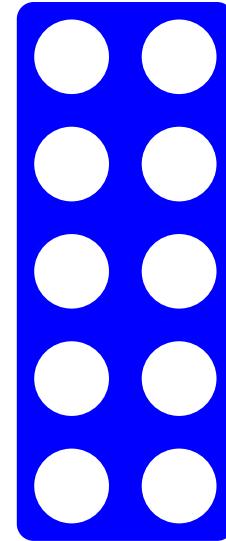
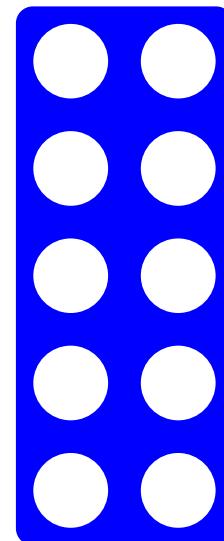
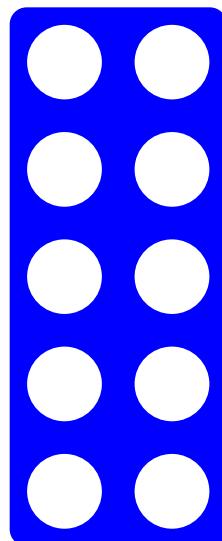
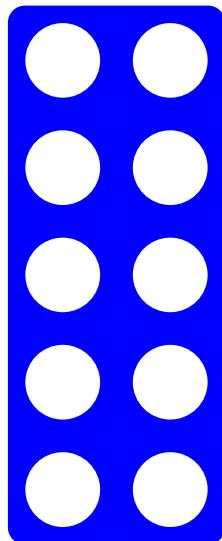
LLUOSI/MULTIPLICATION

Setiau/Sets of



$$5 + 5 + 5 = 15$$

$$3 \times 5 = 15$$



$$10 + 10 + 10 + 10 = 40$$

$$4 \times 10 = 40$$

$$23 \times 8$$

2 × 10

×	20	3
8	160	24

8 × 2 × 10

8 × 3

	1	6	0
+		2	4
	1	8	4

$$\begin{array}{r} 23 \times 8 = 184 \\ 8 \times 23 = 184 \\ 184 \div 23 = 8 \\ 184 \div 8 = 23 \end{array}$$

$$346 \times 9$$

3 × 100
neu
3 × 10 × 10

4 × 10

×	300	40	6
9	2700	360	54

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

9 × 3 × 100
neu
9 × 3 × 10 × 10

9 × 4 × 10

9 × 6

$$\begin{array}{r} 346 \times 9 = 3114 \\ 9 \times 346 = 3114 \\ 3114 \div 346 = 9 \\ 3114 \div 9 = 346 \end{array}$$

6

$$56 \times 27$$

2×10

$5 \times 10 \times 7$
neu
 $5 \times 7 \times 10$

5×10

x	20	7
50	1000	350
6	120	42

$5 \times 10 \times 2 \times 10$
neu
 $5 \times 2 \times 10 \times 10$

$6 \times 2 \times 10$

$$56 \times 27 = 1512$$

$$27 \times 56 = 1512$$

$$1512 \div 56 = 27$$

$$1512 \div 27 = 56$$

	5	6
x	2	7
	4	2
	3	5
	1	2
	1	0
	1	5
	1	2

11

$$4.9 \times 3$$

$9 \div 10$

$(3 \times 9) \div 10$

x	4	0.9
3	12	2.7

3×4

4	.	9
x		3
	2	.
	1	2
	1	4
	.	7

$$4.9 \times 3 = 14.7$$

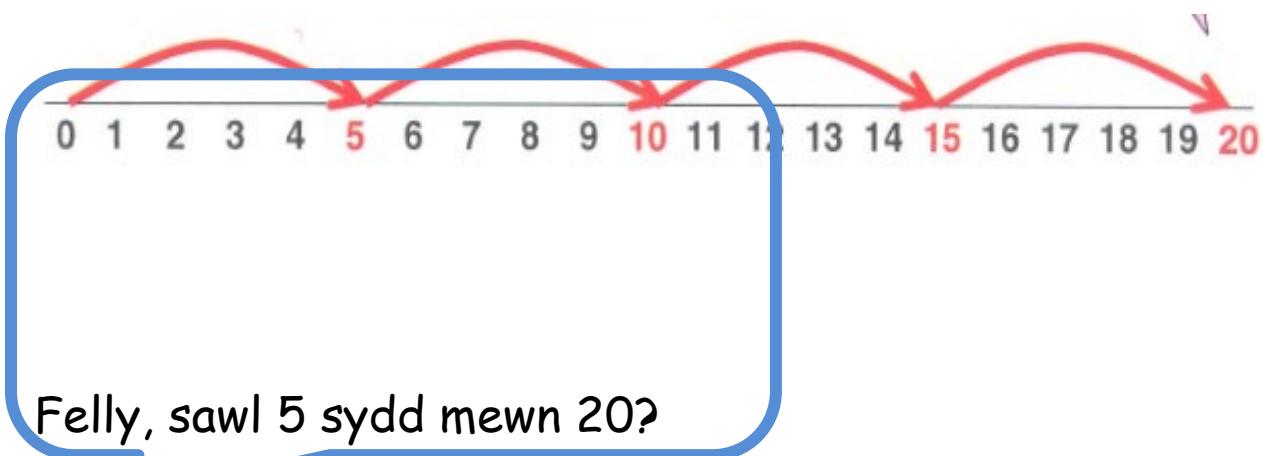
$$3 \times 4.9 = 14.7$$

$$14.7 \div 4.9 = 3$$

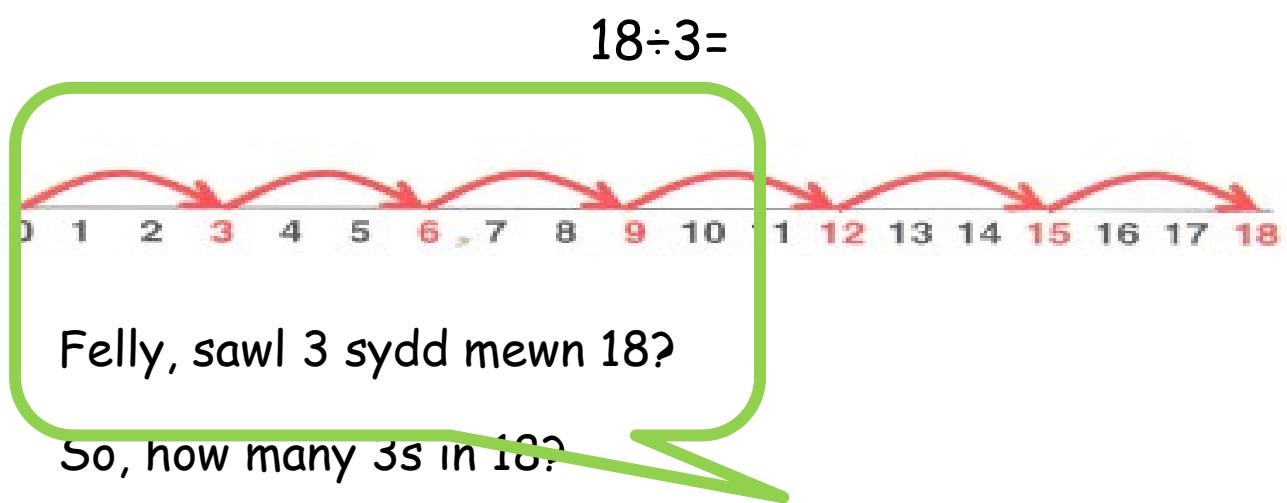
$$14.7 \div 3 = 4.9$$

RHANNU/DIVISON

$$20 \div 5 =$$

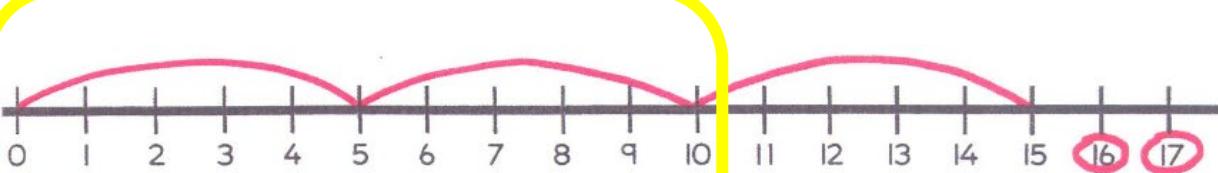


$$20 \div 5 = 4$$



$$18 \div 3 = 6$$

$$17 \div 5 =$$



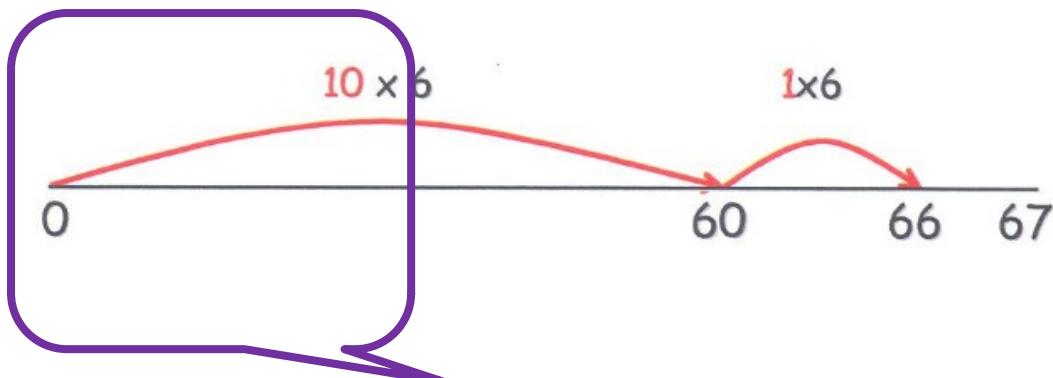
Felly, sawl 5 sydd mewn 17?

So, how many 5s in 17?

3 a gweddill 2

3 remainder 2

$$67 \div 6 =$$



Felly/so,

$$67 \div 6 = 11 \text{ g/r } 1$$

$$69 \div 4$$

$$\begin{array}{r} 1 & 7 \\ \text{gw. } 1 \\ 4 \overline{)6 \quad 9} \\ - 4 \quad 0 \\ \hline 2 \quad 9 \\ - 2 \quad 0 \\ \hline 9 \\ - 8 \\ \hline 1 \end{array}$$

$$\underline{10 \times 4}$$

$$\underline{5 \times 4}$$

$$\underline{\underline{2 \times 4}}$$

1	x	4	=	4
2	x	4	=	8
5	x	4	=	20
1	0	x	4	= 40

$$\underline{75 \div 5}$$

$$\begin{array}{r} 1 & 5 \\ 5 \overline{)7 \quad 5} \\ - 5 \quad 0 \\ \hline 2 \quad 5 \\ - 2 \quad 5 \\ \hline 0 \end{array}$$

$$\underline{10 \times 5}$$

$$\underline{5 \times 5}$$

1	x	5	=	5
2	x	5	=	10
5	x	5	=	25
1	0	x	5	= 50

$$75 \div 5 = 15 \quad 75 \div 15 = 5$$

$$15 \times 5 = 75 \quad 5 \times 15 = 75$$