Lots of ALGEBRA 5 ANSWERS

Expand

4(x-5)
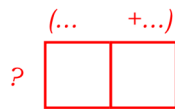
4x-20

4x-45	4x+20	4x-20	4x-5

Use the CLAW

? (... + ...)

or the BOXES

(...   +...)

?
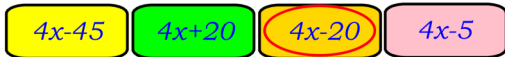
Expand and simplify

4m(x-5)

4mx - 20m

Use the CLAW

? (... + ...)

or the BOXES

(...   +...)

?
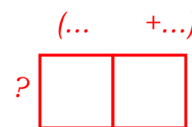
Expand and simplify

4m(e+5)

= 4em + 20m

Use the CLAW

? (... + ...)

or the BOXES

(...   +...)

?
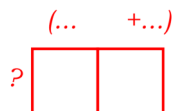
Expand and simplify

4(x+5) - 5(x-3)

= 4x + 20 - 5x +15
= 35 - x

Use the CLAW

? (... + ...)

or the BOXES

(...   +...)

?
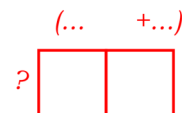
Expand and simplify

4m(9-5m)

= 36m - 20m²

Use the CLAW

? (... + ...)

or the BOXES

(...   +...)

?
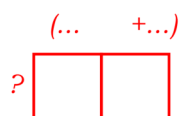
Expand and simplify

4m(m+5)

= 4m² +20m

Use the CLAW

? (... + ...)

or the BOXES

(...   +...)

?
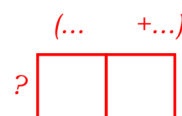
Factorise

4x-10

2(2x - 5)

Remember
Factorise and Factories
Factories make (...)

Factorise

2x+8

2(x+4)

Remember
Factorise and Factories
Factories make (...)

Factorise

$2xy-3x$

$x(2y - 3)$

Remember
Factorise and Factories
Factories make (...)

Factorise

$5z-10z^2$

$5z(1 - 2z)$

Remember
Factorise and Factories
Factories make (...)

Factorise

$2x^2-3x$

$x(2x-3)$

Remember
Factorise and Factories
Factories make (...)

Factorise

$5ab-4b^2$

$b(5a - 4b)$

Find the next 2 terms of this sequence

$11, 19, 27, 35, \underset{+8}{43}, 51$

Explain why 96 cannot be in this sequence

All these numbers are odd numbers and 96 is even so it will not be in the sequence
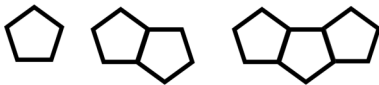
Find the next 2 terms of this sequence

$11, 21, 31, 41, 51, \underset{+10}{61}, 71$

Is 102 in this sequence?

No, because it always ends in 1

A sequence is made up from straight lines

Fill in this table

Shape	1	2	3	4	5	6
lines	5	9	13	17	21	25

+4 +4 +4 +4 +4

How many lines will pattern 100 have?

It is going up in 4 everytime

so the pattern is the multiples of 4 then add 1

so 4x100 then add 1 Answer 401 lines

A sequence is made up from straight lines

Fill in this table

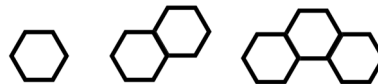| Shape	1	2	3	4	5	6
lines	6	11	16	21	26	31

+5 +5 +5 +5 +5

How many lines will pattern 100 have?

It is going up in 5 everytime

so the pattern is the multiples of 5 then add 1

so 5x100 then add 1 Answer 501 lines

Find the first 4 terms and the 10th term of the sequence given by

$n^{th}\ term = 4n+1$

Just substitute the numbers n=1 into the nth term formula

then n=2   then n=3

5,   9,   13,   17   and   41

Find the first 4 terms and the 10th term of the sequence given by

$n^{th}\ term = 5n+1$

Just substitute the numbers n=1 into the nth term formula

then n=2   then n=3

6,   11,   16,   21   and   51

Find the first 4 terms and the 10th term of the sequence given by

$$n^{th}\ term = n^2 + 1$$

Just substitute the numbers n=1 into the nth term formula

then n=2   then n=3

2,   5,   10,   17   and   101

Find the nth term of this sequence

4, 7, 10, 13, … , …

3   3   3

Going up always in 3

3n which is 3, 6, 9, 12, 15, …

Answer 3n+1

Find the nth term of this sequence

11, 21, 31, 41, 51, … , …

10   10   10

Going up always in 10

10n which is 10, 20, 30, 40, 50, …

Answer 10n+1

A sequence is made up from straight lines

5   9   13   17

Find the nth term of this sequence

4   4   4

Going up always in 4

4n which is 4, 8, 12, 16, 20

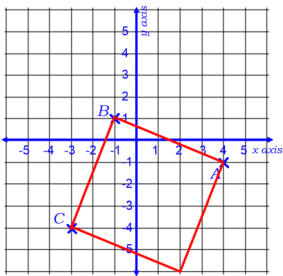*Answer 4n+1*

Find the nth term of this sequence

31, 27, 23, 19 , … , …

-4   -4   -4

Going down always in 4

-4n which is -4, -8, -12, -16

Answer 35-4n
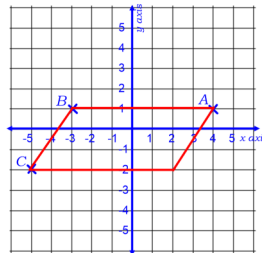
What are these coordinates?

A = (4,1)   B = (-3,1)

C = (-5,-2)

Another point D makes ABCD a parallelogram.

Where is D?

D =(2,-2)

Remember
- Crawl before you walk
- Along the corridor then up the stairs

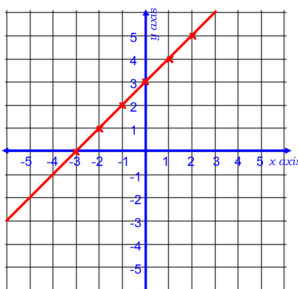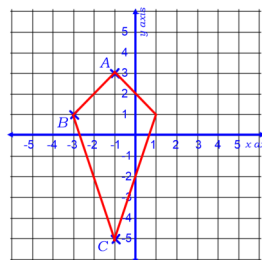What are these coordinates?

A = (4,-1)   B = (-1,1)

C = (-3,-4)

Another point D makes ABCD a square.

Where is D?

D =(2,-6)

Remember
- Crawl before you walk
- Along the corridor then up the stairs

What are these coordinates?
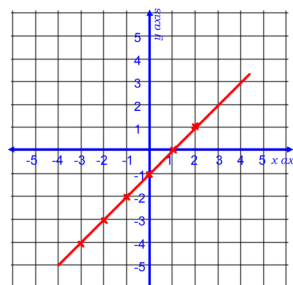
A = (-1,3)   B = (-3,1)

C = (-1,-5)

Another point D makes ABCD a kite

Where is D?

D =(1,1)

Remember
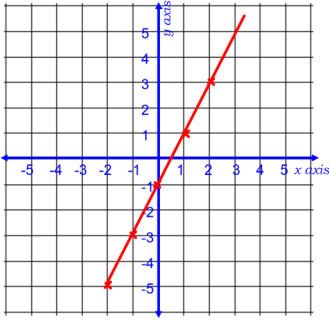- Crawl before you walk
- Along the corridor then up the stairs

Fill in this table for the graph

$y=x+3$

x	-3	-2	-1	0	1	2
y	0	1	2	3	4	5

Now plot the points and draw the line.

Fill in this table for the graph

$y=x-1$

x	-3	-2	-1	0	1	2
y	-4	-3	-2	-1	0	1

Now plot the points and draw the line.

Fill in this table for the graph

$y=2x-1$

x	-3	-2	-1	0	1	2
y	-7	-5	-3	-1	1	3

Now plot the points and draw the line.
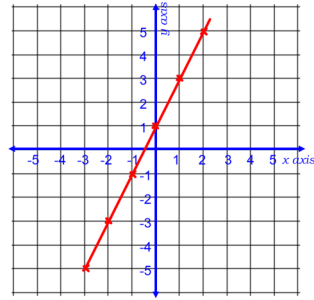
Fill in this table for the graph

$y=2x+1$

x	-3	-2	-1	0	1	2
y	-5	-3	-1	1	3	5

Now plot the points and draw the line.
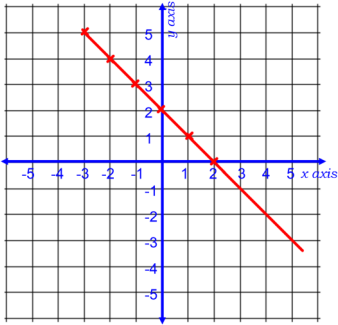
Fill in this table for the graph

$x+y=2$

x	-3	-2	-1	0	1	2
y	5	4	3	2	1	0

Now plot the points and draw the line.
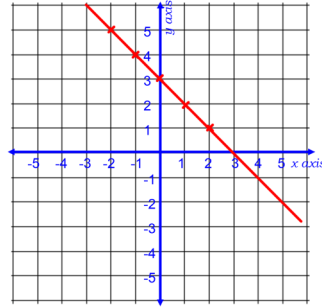
Fill in this table for the graph

$x+y=3$

x	-3	-2	-1	0	1	2
y	6	5	4	3	2	1

Now plot the points and draw the line.
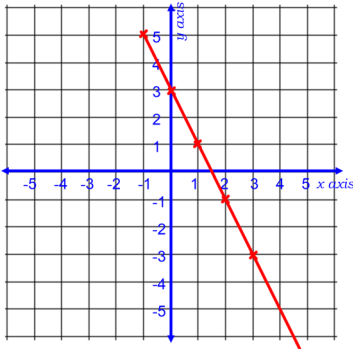
Fill in this table for the graph

$2x+y=3$

x	-2	-1	0	1	2	3
y	7	5	3	1	-1	-3

Now plot the points and draw the line.