B1 Patterns & Equations from T.O.V's

Note Title 24/03/2014

Solve the following:

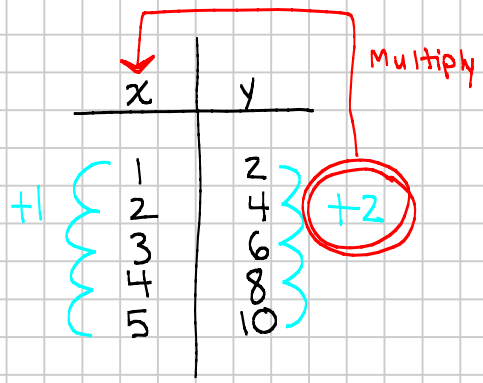
1. a) Identify the pattern (see table)

b) Is it linear? Explain. Yes, same pattern in columns

★ c) Write an equation for y in terms of x (means using x how can we find y?)

d) If $x = 50$, what is y?

e) Graph it.

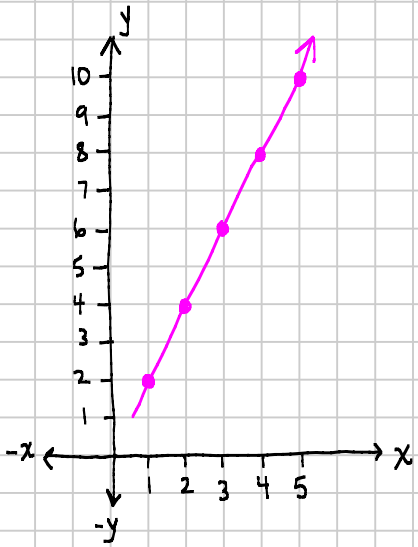


c) Pattern on y side gets multiplied to x.

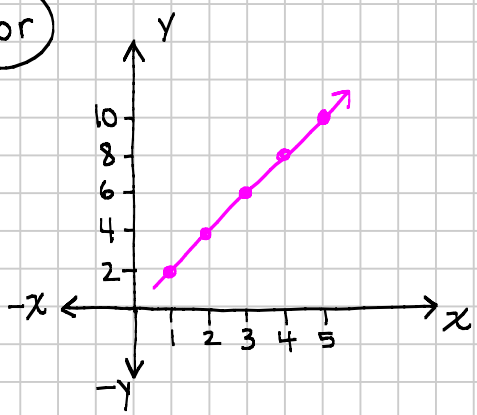
$y = 2(x)$

d) $x = 50$ $y = 2(50) = 100$

e)



or



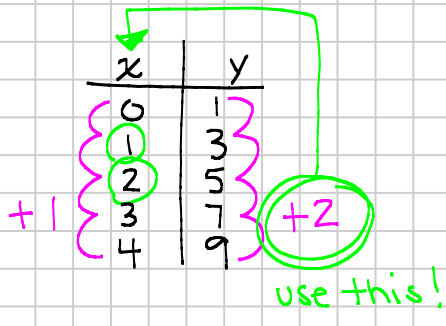
consective: one after another ex: 1, 2 99, 100 -3, -4

2. a) Identify pattern: (t.o.v)

b) Equation for y in terms of x:

c) If $x = 15$ what is y?

d) If $x = -10$, what is y?



b) $y = 2(x) + 1$

x	y
$2(0) = 0 + 1$	$= 1$
$2(1) = 2 + 1$	$= 3$
$2(2) = 4 + 1$	$= 5$

c) $x = 15 \rightarrow y = 2x + 1$
$2(15) + 1$
$30 + 1$
$y = 31$

d) $x = -10 \rightarrow y = 2x + 1$
$2(-10) + 1$
$-20 + 1$
$y = -19$

3. a) Identify pattern: T.O.V

b) Equation for y in terms of x:

c) $x = 22$, $y = ?$

x	y	
0	2	
1	5	
2	8	+3
3	11	
+1		

b) $y = 3(x) + 2$

x	y
$3(0) = 0 + 2$	$= 2$
$3(1) = 3 + 2$	$= 5$

c) $x = 22$ $\quad y = 3x + 2$
$3(22) + 2$
$66 + 2$
$y = 68$

4. a) Identify pattern: +ov

b) Equation for y:

c) $x = -100$, $y = ?$

x	y	
−4	11	
−3	9	−2
−2	7	
−1	5	
+1		

b) $y = -2x + 3$

x	y
$-2(-4) = 8 + 3$	$= 11$
$-2(-3) = 6 + 3$	$= 9$

c) $y = -2(-100) + 3$
$200 + 3$
$y = 203$

5. Are the following linear? Explain.

a)

x	y	
1	1	
4	10	+9
7	19	
+3		

yes
constant patterns in columns.

b)

x	r	0	-1	-2	-3
y	s	0	2	4	8
			+2	+4	

−1

NO, jump in pattern.

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