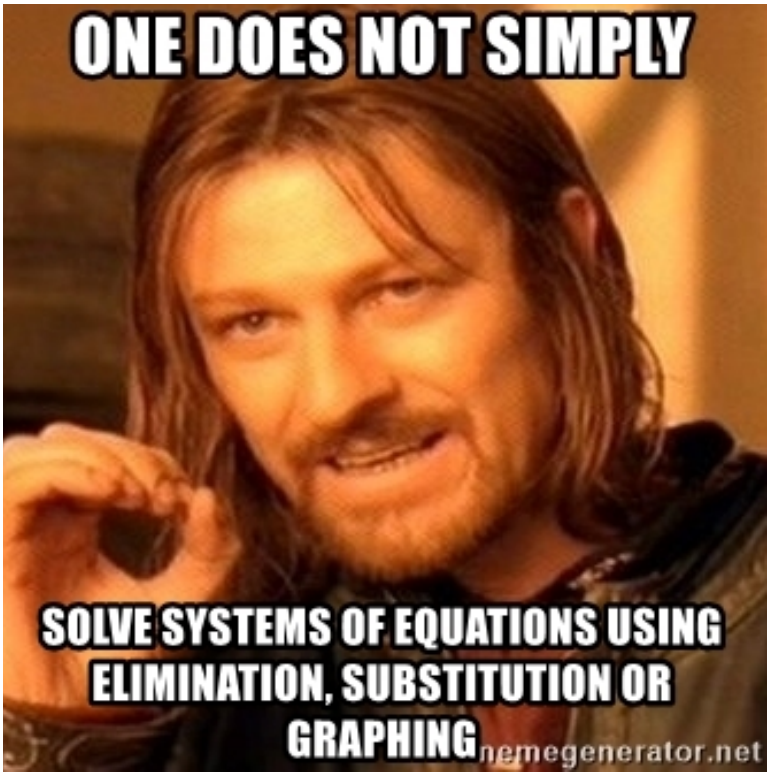
Good morning!

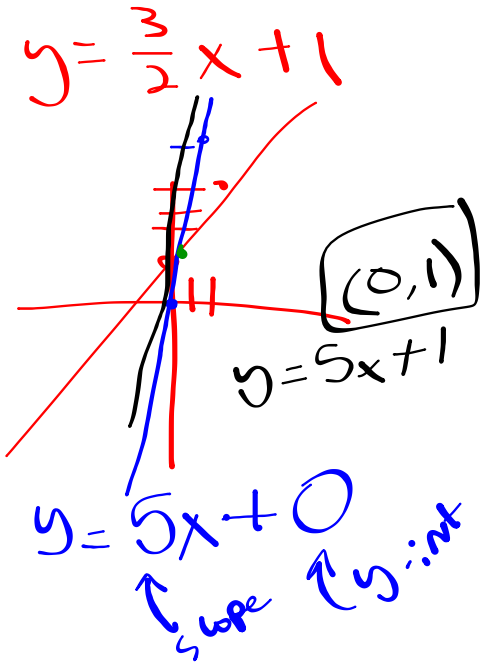
1. "Here"

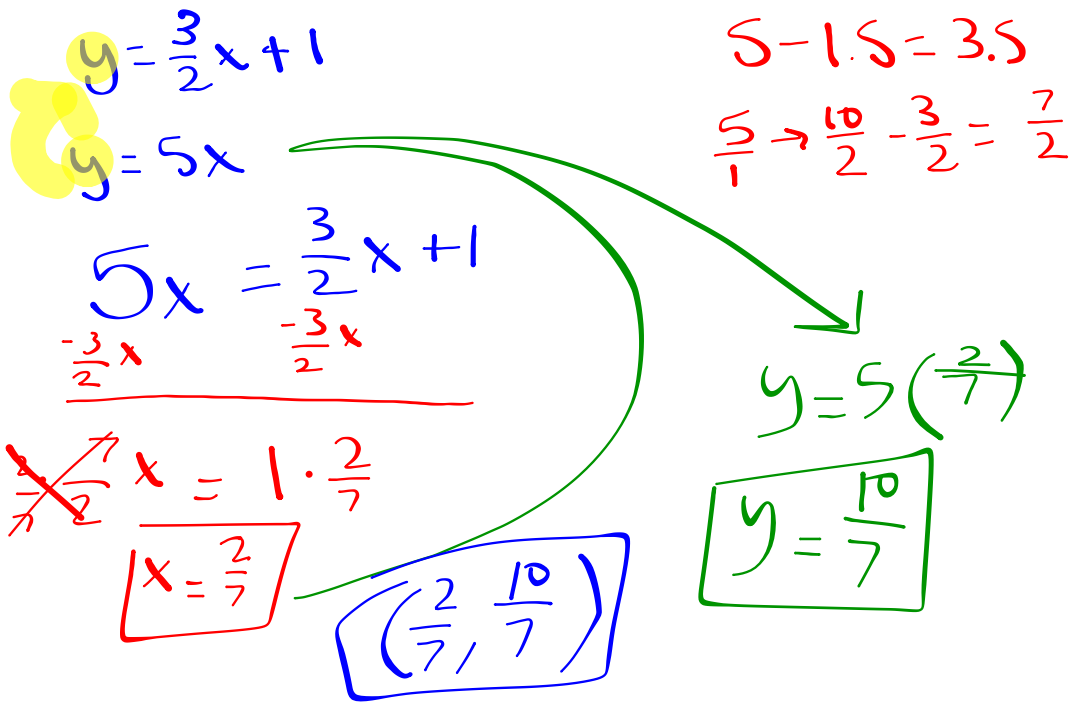
2. Notes on Solving Systems of Equations by Substitution

3. Upload Practice to CTLS

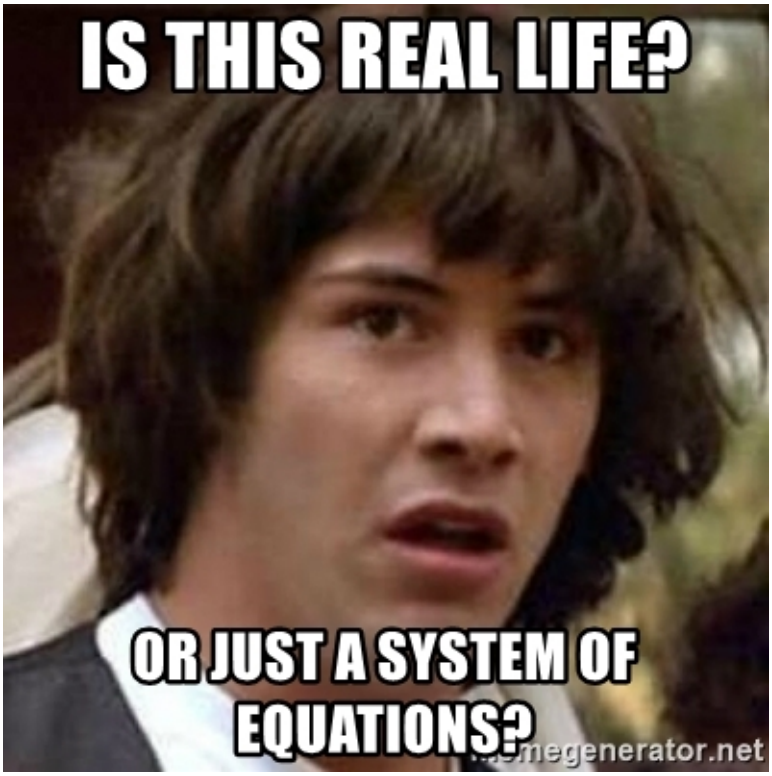
4. DeltaMath homework


ONE DOES NOT SIMPLY
SOLVE SYSTEMS OF EQUATIONS USING ELIMINATION, SUBSTITUTION OR GRAPHING
nemegenerator.net


y = 3/2 x + 1
(0,1)
y = 5x + 1
y = 5x + 0
slope
y-int


y = 3/2 x + 1
y = 5x
5x = 3/2 x + 1
-3/2 x
-3/2 x
x = 1 · 2/7
x = 2/7
(2/7, 10/7)
5 - 1.5 = 3.5
5/1 → 10/2 - 3/2 = 7/2
y = 5(2/7)
y = 10/7

Monday	Tuesday	Wednesday	Thursday	Friday
Jan. 25th	Jan. 26th	Jan. 27th	Jan. 28th	Jan. 29th
			Unit 1 Part 2 Quiz	Solving Systems by Graphing
Feb. 1st	Feb. 2nd	Feb. 3rd	Feb. 4th	Feb. 5th
Solving Systems by Substitution	Solving Systems by Elimination Quiz	Quiz due at midnight	Systems of Equations Word Problems	Graphing Systems of Inequalities
Feb. 8th	Feb. 9th	Feb. 10th	Feb. 11th	Feb. 12th
Graphing Systems of Inequalities	Review Test	Test due at midnight	Factoring by GCF	Factoring

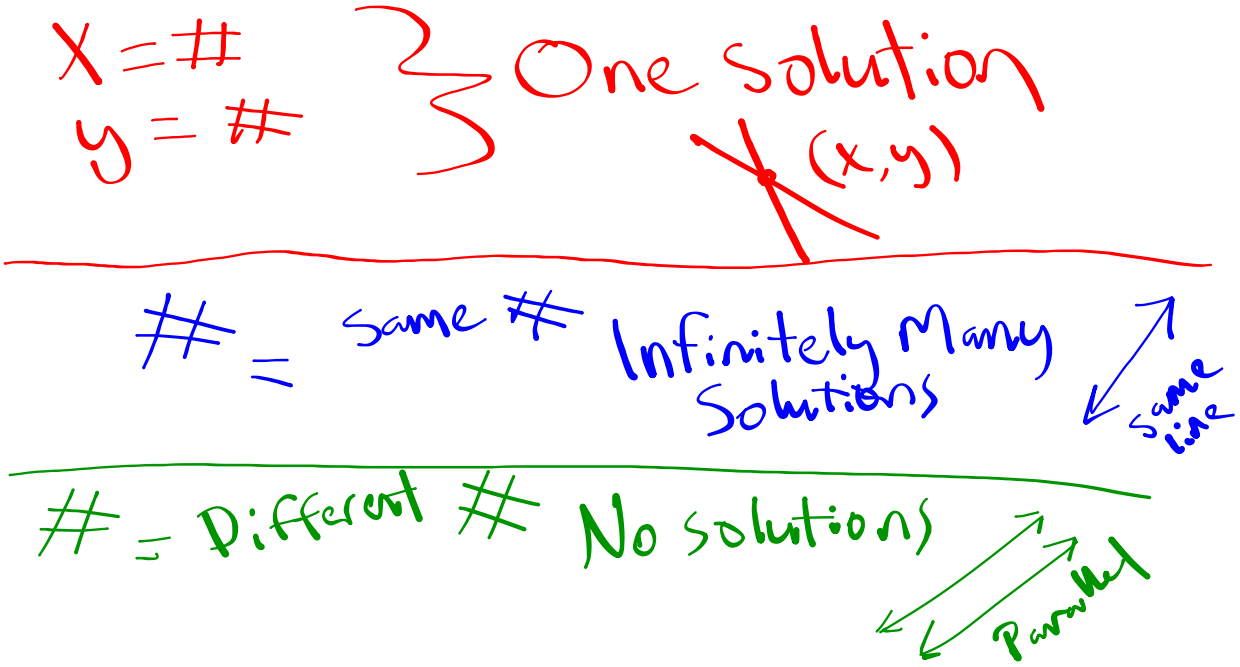

IS THIS REAL LIFE?
OR JUST A SYSTEM OF EQUATIONS?
megenerator.net

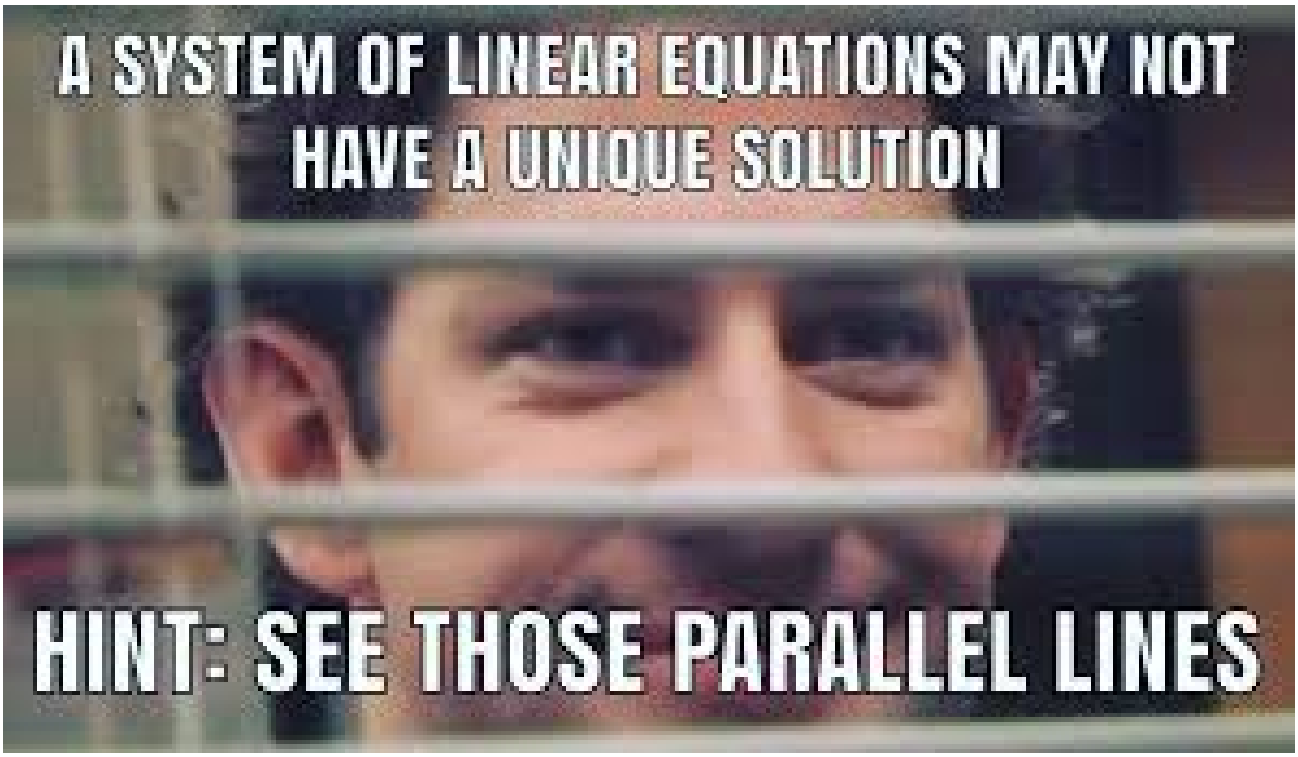
Solving Systems of Equations by Substitution

x = ~~~ y = ~~~

Steps	Example: $y = x+3$, $-3x + 3y = 4$
1) Substitution is used when you have a variable by itself: identify that variable	y
2) Look at the other equation and identify where you can substitute the equation from step one	$-3x+3(\quad)=4$
3) Substitute and solve	$-3x+3(x+3)=4$ $-3x+3x+9=4$ $0+9=4$ $9 \neq 4$ no solution
4) Substitute for the variable you solved for in step 3 and solve for the remaining variable	
5) Write your solution as an ordered pair	

Steps	Example: $2x - 3y = -24$, $x + 6y = 18$
1) Substitution is used when you have a variable with a coefficient of 1: identify that variable	x
2) Solve for the variable that has a coefficient of one	$x+6y=18$ $-6y \quad -6y$ $x = -6y+18$
3) Identify the variable that you can substitute your newly solved equation	$x \quad 2(-6y+18)-3y=-24$
4) Substitute and Solve	$-12y+36-3y=-24$ $-15y+36=-24$ $-36 \quad -36$ $\frac{-15y}{-15} = \frac{-60}{-15}$ $y=4$
5) Substitute for the variable you solved for in step 3 and solve for the second variable	$x=-6(4)+18$ $x=-24+18$ $x=-6$
6) Write your solution as an ordered pair	(-6, 4)

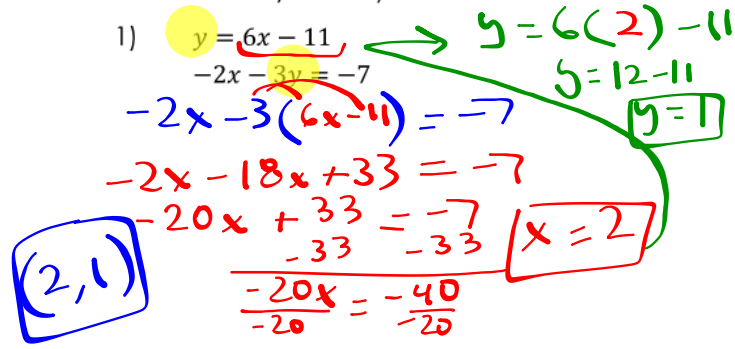

x = #
y = #
One solution
(x, y)
= same
Infinitely Many Solutions
same line
= Different
No solutions
Parallel


A SYSTEM OF LINEAR EQUATIONS MAY NOT HAVE A UNIQUE SOLUTION
HINT: SEE THOSE PARALLEL LINES

Solving Systems of Equations by Substitution Practice

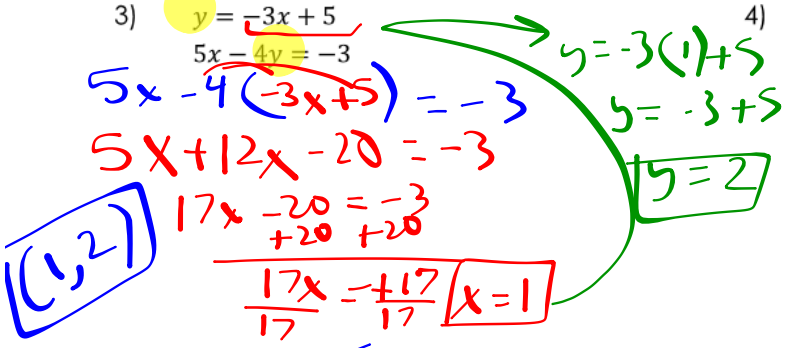
Solve each system by substitution.

1) $y = 6x - 11$
$-2x - 3y = -7$



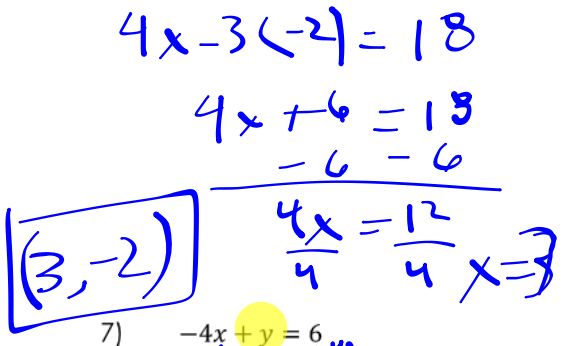
2) $2x - 3y = -1$
$y = x - 1$

3) $y = -3x + 5$
$5x - 4y = -3$



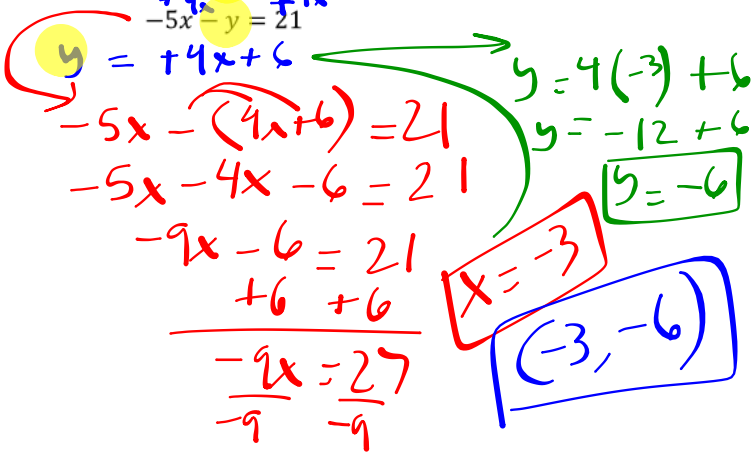
4) $-3x - 3y = 3$
$y = -5x - 17$

5) $y = -2$
$4x - 3y = 18$

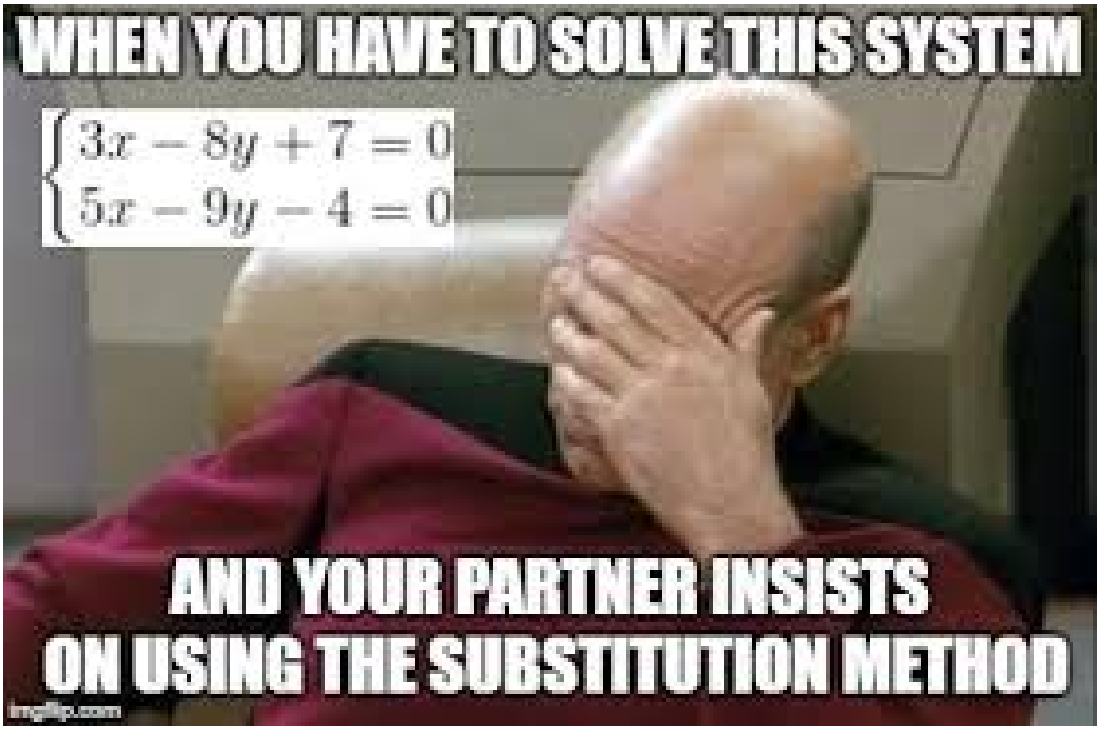


6) $y = 5x - 7$
$-3x - 2y = -12$

7) $-4x + y = 6$
$-5x - y = 21$



8) $-7x - 2y = -13$
$x - 2y = 11$


WHEN YOU HAVE TO SOLVE THIS SYSTEM
$\begin{cases} 3x - 8y + 7 = 0 \\ 5x - 9y - 4 = 0 \end{cases}$
AND YOUR PARTNER INSISTS
ON USING THE SUBSTITUTION METHOD
imgflip.com

Why Does the President Put Vegetables in His Blender?

Directions: Solve each system of equations below by the substitution method. Find the solution in the nearest answer column and notice the two letters next to it. Print these letters in the two boxes at the bottom of the page that contain the number of that exercise.

Answers 1-6
(4,2) LD
(6, −1) NG
(1, 2) TR
(4, 8) HE
(1, −3) HO
(6, −3) NT
(5, 3) FO
(9, 2) PI
(7, 3) TH
(5, 2) IS

1) $y = 2x$
$x + y = 12$

2) $x = 3y - 1$
$x + 2y = 9$

3) $y = 2x - 5$
$4x - y = 7$

4) $2x - 3y = 12$
$x = 4y + 1$

5) $y = -x + 5$
$x - 4y = 10$

6) $x - y = 2$
$4x - 3y = 11$

7) $-2x + 3y = 14$
$x + 2y = 7$

8) $6x - y = -4$
$2x + 2y = 15$

9) $x + y = 1$
$2x - y = -2$

10) $5x - 3y = -11$
$x - 2y = 2$

11) $x - y = 3$
$6x + 4y = 13$

12) $2x - y = 16$
$-x + 2y = -8$

Answers 7-12
$\left(\frac{1}{2}, -3\right)$ IN
$\left(8, -\frac{1}{2}\right)$ VE
$\left(-\frac{1}{3}, \frac{4}{3}\right)$ RL
(8, 0) AS
(−3, 4) TE
$\left(\frac{1}{2}, 7\right)$ HI
$\left(\frac{5}{2}, \frac{4}{3}\right)$ LO
(−1, 4) RW
$\left(\frac{5}{2}, -\frac{1}{2}\right)$ PE
(−4, −3) ED

1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12