

1.1 Graphing

GOALS:

1. Understand how word problems translate to algebraic equations.
2. Determine ordered pairs that are solutions of equations.
3. Plot points of solution for an equation and sketch the graph of the equation.

Study 1.1 CVC 1-9, # 1- 9; 13, 17,
21, 25; 33 - 53; 57, 67 - 83

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1.1 Graphing

Convert to Algebra:

The average yearly salary of a an American whose final degree is a master's is \$50,000 less than twice that of an American whose final degree is a bachelor's.

Has the Form:

y is 50000 less than twice x

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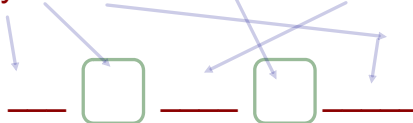
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1.1 Graphing

Has the Form:

y is 50000 less than twice x



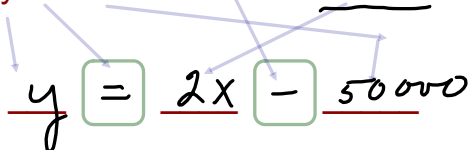
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1.1 Graphing

Has the Form:

y is 50000 less than twice x



verbs

$=$	\geq
$>$	\leq
$<$	\leq

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1.1 Graphing

Convert to Algebra:

The average yearly salary of a an American whose final degree is a master's is \$50,000 less than twice that of an American whose final degree is a bachelor's.

$$y = 2x - 50,000$$

where

y = salary of American with master's degree
and

x = salary of American with bachelor's degree

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1.1 Graphing

When is this sentence true?

$$y = 2x - 5$$

Does $x = 0$ and $y = 0$ make it true?

Does $(0, 10)$ make it true?

Does $(0, -5)$ satisfy the equation,
making it true?

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1.1 Graphing

When is this sentence true?

$$y = 2x - 5$$

Does $x = 0$ and $y = 0$ make it true?

No

 $(0,0)$ is **not** a solutionDoes $(0, 10)$ make it true?

No

 $(0,10)$ is **not** a solutionDoes $(0, -5)$ satisfy the equation, making it true?

Yes

 $(0, -5)$ **is** a solution

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1.1 Graphing

When is this sentence true?

Find other solutions to the equation.

$$y = 2x - 5$$

 $(-3, \underline{\quad})$ $(-2, \underline{\quad})$ $(-1, \underline{\quad})$ $(1, \underline{\quad})$ $(2, \underline{\quad})$ $(3, \underline{\quad})$

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

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1.1 Graphing

When is this sentence true?

Find other solutions to the equation.

$$y = 2x - 5$$

$$(-3, \underline{-11}) \quad y = 2(-3) - 5 = -6 - 5 = -11$$

$$(-2, \underline{-9}) \quad y = 2(-2) - 5 = -4 - 5 = -9$$

$$(-1, \underline{-7}) \quad y = 2(-1) - 5 = -2 - 5 = -7$$

$$(1, \underline{-3}) \quad y = 2(1) - 5 = 2 - 5 = -3$$

$$(2, \underline{-1}) \quad y = 2(2) - 5 = 4 - 5 = -1$$

$$(3, \underline{1}) \quad y = 2(3) - 5 = 6 - 5 = 1$$

x	y
-3	-11
-2	-9
-1	-7
0	-5
1	-3
2	-1
3	1

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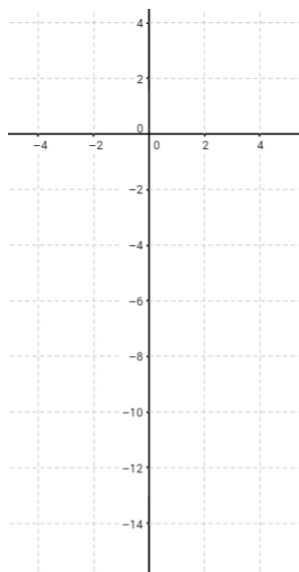
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1.1 Graphing

$$y = 2x - 5$$

To Graph the equation,

1. Plot the points. 2. Draw curve through points.



x	y
-3	-11
-2	-9
-1	-7
0	-5
1	-3
2	-1
3	+1

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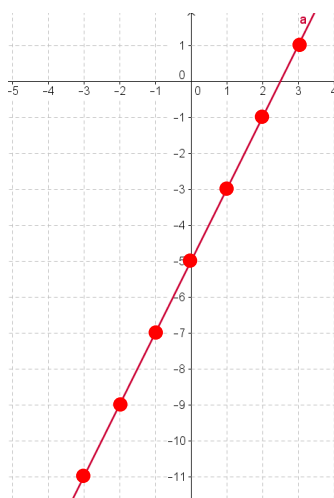
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1.1 Graphing

$$y = 2x - 5$$

To Graph the equation,

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x	y
-3	-11
-2	-9
-1	-7
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1	-3
2	-1
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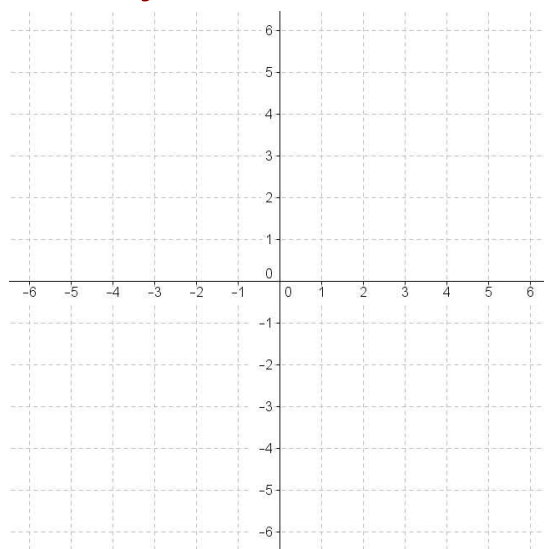
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1.1 Graphing

$$y = x^2 - 4$$

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



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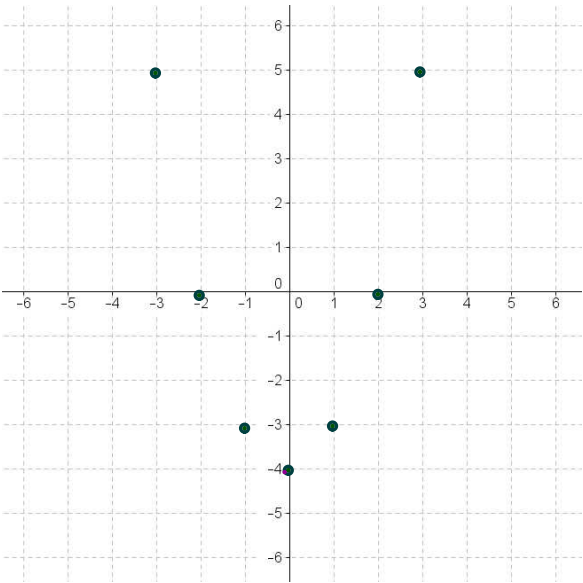
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1.1 Graphing

$y = x^2 - 4$

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



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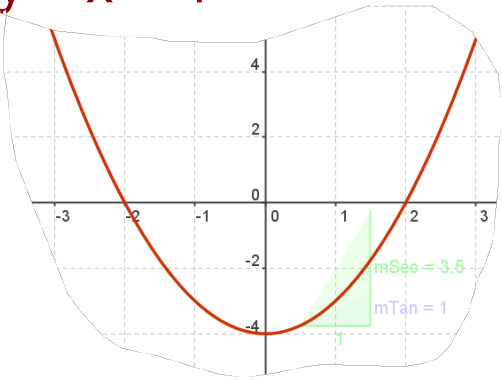
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1.1 Graphing

$y = x^2 - 4$

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



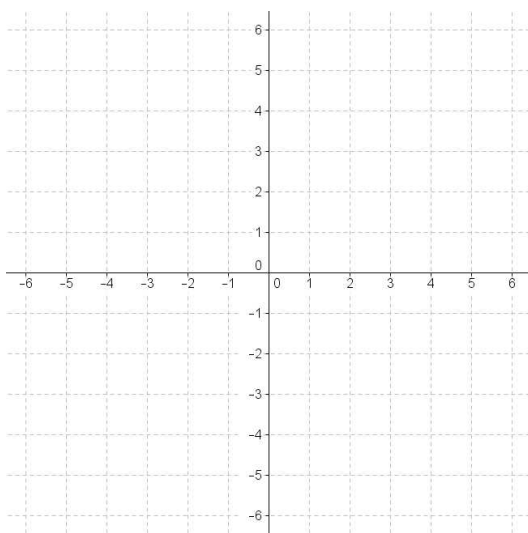
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Graph:

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



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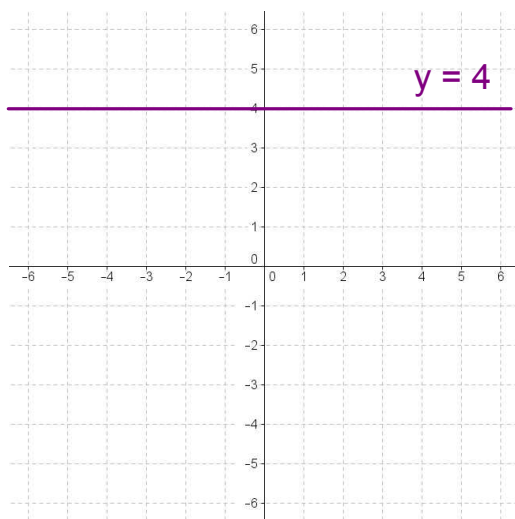
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x	y
-3	4
-2	4
-1	4
0	4
1	4
2	4
3	4

Graph:

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



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