

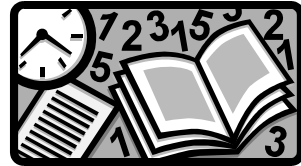


## Determining Solution Points

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# You can do this!



Analytically or  
“Algebraically”



Look at a specific equation

$$y = 10x - 7$$



To check and see if an ordered pair is a solution, substitute the ordered pair and see if the equation is a true statement.



Math Alert:  
Left side equals  
right side to  
have a solution to  
the equation---  
Check it out!!!



## Analytically

$$y = 10x - 7$$



We substitute  
values in the  
equation for x and y

$$x = 2, y = 13$$



## Analytically

$$y = 10x - 7$$



$$(13) = 10(2) - 7$$



## Analytically

$$y = 10x - 7$$

$$13 = 10(2) - 7$$



$$13 = 20 - 7$$



## Analytically

$$y = 10x - 7$$

$$(13) = 10(2) - 7$$

$$13 = 20 - 7$$



$$13 = 13$$



## Analytically

$$y = 10x - 7$$

$$(13) = 10(2) - 7$$

$$13 = 20 - 7$$

$$13 = 13$$



## Analytically


$$y = 10x - 7$$

$$x = 2, y = 13$$

$$13 = 13$$

Therefore, **(2, 13)** is  
called a  
**solution** of the  
equation.








Analytically

$$y = 10x - 7$$




$$x = 2, y = 13$$

$$13 = 13 \checkmark$$




Left side equals **right** side !!!



Solution: A **solution** of an equation is any value of the variable(s) for which the equation is true.






Remember most equations have **infinite** solutions--- many, many, and then some more, and then some more...






Now look at the specific equation again....

$$y = 10x - 7$$






Math Alert:  
 When substituting into an equation for 'x' and 'y', usually, 'y' NOT 'x' goes first.  
 Watch out!!!





Analytically



$$y = 10x - 7$$

$$x = -1, y = -3$$


$$(-3) = 10(-1) - 7$$

  
 "First" Y


  
 "Then" X

## Analytically

$$y = 10x - 7$$

$$(-3) = 10(-1) - 7$$

 
$$-3 = -10 - 7$$




## Analytically

$$y = 10x - 7$$

$$(-3) = 10(-1) - 7$$

$$-3 = -10 - 7$$

 
$$-3 \neq -17$$




## Analytically

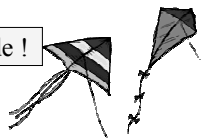
$$y = 10x - 7$$

$$(-3) = 10(-1) - 7$$

$$-3 = -10 - 7$$

 
$$-3 \neq -17$$

Left side does **NOT** equal right side !



## Analytically

$$y = 10x - 7$$

$$x = -1, y = -3$$

$$-3 \neq -17$$

Therefore, **(-3, -17)** is  
**not** called a  
**solution** of the  
equation!



Solution: A **solution** of an equation is any value of the variable(s) for which the equation is true



To check and see if an ordered pair is a solution, substitute the ordered pair and see if the equation is a true statement



You can do this!



## Determining Solution Points

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The End...Push Home

