

Algebra I Worksheet #7 Unit 2 page 1

Complete the table for each input-output chart shown.

	1.	2.	3.	4.
Input	$5x + 5 = 2x + 11$	$8x + 7 = 3x + 42$	$8x + 14 = x + 35$	$6x + 9 = 4x + 23$
↓ First Operation	subtract 2x from both sides	subtract 3x from both sides	subtract x from both sides	
↓ Output				
↓ Second Operation	subtract 5 from both sides	subtract 7 from both sides		
↓ Output				
↓ Third Operation	divide both sides by 3			
↓ Output				

	5.	6.	7.	8.
Input	$5x - 9 = 3x + 3$	$8x - 4 = 3x + 16$	$7x - 6 = 4x + 12$	$9x - 10 = 5x + 14$
↓ First Operation	subtract 3x from both sides	subtract 3x from both sides	subtract 4x from both sides	
↓ Output				
↓ Second Operation	add 9 to both sides	add 4 to both sides		
↓ Output				
↓ Third Operation	divide both sides by 2			
↓ Output				

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Solve the following equations. Show your steps.

9. $8x + 6 = 5x + 30$

10. $4x - 7 = 2x + 9$

11. $6x + 10 = x + 25$

12. $5x + 9 = 3x + 23$

13. $6x + 20 = -2x + 36$

14. $8x - 14 = x + 21$

15. $-7x - 36 = 2x + 36$

16. $15x - 18 = 3x - 66$

17. $x + 10 = 5x - 34$

Simplify each of the following expressions.

18. $3x + 5x = \underline{\hspace{2cm}}$

19. $2(x + 5) = \underline{\hspace{2cm}}$

20. $x + 3(x + 2) = \underline{\hspace{2cm}}$

21. $3(5x - 2) = \underline{\hspace{2cm}}$

22. $7x - 4x = \underline{\hspace{2cm}}$

23. $5x + 4(2x - 3) = \underline{\hspace{2cm}}$

24. $5(2x + 3) + 2(3x + 5) = \underline{\hspace{2cm}}$

25. $4(6x + 3) + 3(4x - 2) = \underline{\hspace{2cm}}$