

Algebra I Worksheet #5 Unit 2 page 1

Complete the table for each input-output chart shown.

	1.	2.	3.	4.
Input	$3x + 7 = 31$	$7x + 2 = 30$	$6x + 3 = 15$	$4x + 6 = 22$
↓ First Operation	subtract 7 from both sides	subtract 2 from both sides		
↓ Output				
↓ Second Operation	divide both sides by 3			
↓ Output				

	5.	6.	7.	8.
Input	$5x - 6 = 34$	$9x - 4 = 41$	$8x - 4 = 20$	$2x - 7 = 15$
↓ First Operation	add 6 to both sides	add 4 to both sides		
↓ Output				
↓ Second Operation	divide both sides by 5			
↓ Output				

Solve the following equations. Show your steps.

9. $3x + 9 = 24$

10. $4x - 6 = 18$

11. $5x + 10 = 20$

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Solve the following equations. Show your steps.

12. $2x - 6 = 12$

13. $8x + 12 = 20$

14. $6x - 15 = 27$

15. $9x + 15 = 33$

16. $7x - 9 = 19$

17. $10x + 15 = 65$

Write an algebraic expression for each of the following.

18. Billy and Brian have marbles. The number that Billy has is three times the number that Brian has. Let x represent the number of marbles that Brian has. Represent the number of marbles that Billy has in terms of x . _____

19. Billy and Brian have marbles. The number that Billy has is five less than three times the number that Brian has. Let x represent the number of marbles that Brian has. Represent the number of marbles that Billy has in terms of x . _____

20. Mary and Sally have marbles. The number that Mary has is two times the number that Sally has. Let y represent the number of marbles that Sally has. Represent the number of marbles that Mary has in terms of y . _____

21. Mary and Sally have marbles. The number that Mary has is four more than two times the number that Sally has. Let y represent the number of marbles that Sally has. Represent the number of marbles that Mary has in terms of y . _____

22. Paul and Alice have marbles. The number that Alice has is nine less than five times the number that Paul has. Let p represent the number of marbles that Paul has. Represent the number of marbles that Alice has in terms of p . _____