

Algebra I Review Unit 2 page 1

Complete the table for each input-output chart shown.

| | 1. | 2. | 3. | 4. |
|------------------|----------------------------------|---------------------------|------------------------------|--------------------------------|
| Input | $x + 8 = 13$ | $x - 9 = 7$ | $6x = 30$ | $\frac{x}{3} = 9$ |
| ↓ | | | | |
| Operation | subtract 8 from both sides | add 9 to both sides | divide both sides by 6 | multiply both sides by 3 |
| ↓ | | | | |
| Output | | | | |

| | 5. | 6. | 7. | 8. |
|------------------|--------------|-------------|-----------|-------------------|
| Input | $x + 9 = 12$ | $x - 3 = 5$ | $9x = 54$ | $\frac{x}{7} = 3$ |
| ↓ | | | | |
| Operation | | | | |
| ↓ | | | | |
| Output | | | | |

| | 9. | 10. | 11. | 12. |
|-------------------------|----------------------------------|---------------|------------------------------|---------------|
| Input | $6x + 7 = 37$ | $3x + 6 = 24$ | $5x - 9 = 31$ | $4x - 6 = 22$ |
| ↓ | | | | |
| First Operation | subtract 7 from both sides | | add 9 to both sides | |
| ↓ | | | | |
| Output | | | | |
| ↓ | | | | |
| Second Operation | divide both sides by 6 | | divide both sides by 5 | |
| ↓ | | | | |
| Output | | | | |

Algebra I Review Unit 2 page 2

Solve the following equations. Show your steps neatly organized.

13. $x + 8 = 11$

14. $x - 7 = 2$

15. $5x = 35$

16. $\frac{x}{7} = 7$

17. $3x + 6 = 24$

18. $8x - 12 = 20$

19. $7x + 21 = 56$

20. $4x - 24 = 8$

21. $6x + 9 = 33$

22. $5x - 25 = 35$

23. $9x + 10 = 5x + 38$

24. $8x - 15 = 5x + 12$

25. $7x + 15 = x + 33$

26. $2(3x + 7) + 4(x - 3) = 32$

27. $5(2x - 7) = 3(x + 7)$

28. $2x + 3(3x - 1) = 30$

29. $6(2x + 4) - 3x = 60$

Algebra I Review Unit 2 page 3

Write an algebraic expression for each of the following. In each case, use N for the number.

30. six more than the number : _____

31. nine less than the number : _____

32. three times the number : _____

33. the number divided by two : _____

34. four more than two times the number : _____

35. seven less than five times the number : _____

Write an algebraic expression for each of the following. In each case, use J for Jim's age now.

36. Jim's age next year : _____

37. Jim's age four years ago : _____

38. Jim's age in three years age : _____

39. three times Jim's age : _____

Write an algebraic expression for each of the following.

40. the value in cents of x nickels : _____

41. the value in cents of y dimes : _____