**Algebra Foundations Practice 1**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**For problems 1-5, translate using numbers and symbols. Do not simplify.**

1. seven times *x* plus seven. 1 \_\_\_\_\_\_\_\_\_\_\_\_\_
2. five times the sum of z and four. 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. eight times *y* plus seven. 3. \_\_\_\_\_\_\_\_\_\_\_\_\_
4. three times the sum of n and five. 4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. four times the difference between r and one. 5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**For problems 6 & 10, calculate for the given numbers**

1. 4a – 3b for a = 6 and b = 2 6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. 2a – 5b for a = 4 and b = 3 7. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. 7a – 2b for a = 2 and b = 9 8. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. 3a – 8b for a = 1 and b = 6 9. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. 5a – 4b for a = 7 and b =4 10. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**For Problems 11-15 use the distributive property to simplify**

1. **3(*y* – 3)** 11. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. **5(*z*– 2)** 12. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. **7(*x* – 4)** 13. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. **4(y – 2) - 9 14. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
5. **6(v – 5) - 2 15. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
6. **Combine like terms: 3y + 4y -2y 16. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
7. **Combine like terms: 2x + 3x -5y 17. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
8. **Combine like terms: 5n + 3n -4n 18. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
9. **Combine like terms: 4z + 2z -4y 19. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
10. **Combine like terms: 6y + 3y -4y 20. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
11. **Write the perimeter of the rectangle as an algebraic expression 21. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

3y

 **4x 4x**

 4y + 8

1. **Write the perimeter of the rectangle as an algebraic expression. 22. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

2n

 **4x 4x**

 3n + x

**For problems 23 – 25 solve and check your answer.**

1. 3x = 18 **23. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
2. y – 5 = 10 **24. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
3. z + 12 = 27 **25. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**