Arithmetic Series Name: _____

$a_n = a_1 + (n-1)d \qquad S_n = n(\frac{a_1+a_n}{2})$ Hour: _____

For each arithmetic series, find the indicated sum.

1. 1 + 3 + 5 + 7+... $s_8 =$ _____

2. -2 – 4 – 6 – 8 – 10 – ... $s_6 =$ _____

3. 10 + 20 + 30 + 40 + 50 + ... $s_{10} =$ _____

4. 7.5 + 7.2 + 6.9 + 6.6 + 6.3 + ... $s_5 =$ _____

5. 2 + 6 + 10 + 14 + 18 + ... $s_9 =$ _____

6. 1 + 2 + 3 + 4 + 5 + ... $s_{25} =$ _____

7. 5 + 10 + 15 + 20 + 25 + ... $s_{10} =$ _____

8. 5 + 3 + 1 – 1 – 3 – 5 – 7 – ... $s_{11} =$ _____

9. 2 + 4 + 6 + 8 + 10 + ... $s_7 =$ _____

10. 100 + 101 + 102 + 103 + ... $s_4 =$ _____

11. 3 + 6 + 9 + 12 + 15 + ... $s_9 =$ _____

12. 21 + 19 + 17 + 15 + 13 + ... $s_8 =$ _____

13. -1 - 3 - 5 - 7 - 9 - ... $s_5 =$ _____

14. $\frac{1}{4}+\frac{1}{2}+\frac{3}{4}+1+\frac{5}{4}+\cdots$ $s_7 =$ _____

15. 5.1 + 4.9 + 4.7 + 4.5 + ... $s_{10} =$ _____

16. 1 + 1 + 1 + 1 + 1 + ... $s_{20} =$ _____

17. -2 – 5 – 8 – 11 – 14 - ... $s_6 =$ _____

18. 0 – 1 – 2 – 3 – 4 - ... $s_7 =$ _____

19. 1000 + 2000 + 3000 +... $s_5 =$ _____

20. 0 + 4 + 8 + 12 + ... $s_4 =$ _____

21. A child puts $1.00 into a piggy bank. One week later, he puts $1.25 in the bank. Two weeks later, he puts $1.50 in to the bank, and so on. How much will he have at the end of the 25th week?

$_____

Find the inverse of the following functions.

22. $f(x) = \frac{3x-5}{2}$

23. $f(x) = \sqrt{x-3}+4$