Name _____

1. Find the sum of the series $3 + 5 + 7 + 9 + \cdots + 57$.

2. Find the sum of the series $1 - 3 - 7 - 11 \cdots - 51$.

3. Find the sum of the series $5 - 2 - 9 - 16 \cdots - 156$.

4. In an arithmetic series, $a_1 = -12$ and $a_{14} = 54$. Find the sum of the first 14 terms.

5. In an arithmetic series, find the sum of the first 48 terms if the first term is -6 and the common difference is 2.

6. In an arithmetic series, find the sum of the first n terms if the first term is -11, the common difference is 4, and the nth term is 137.

7. Find the sum of the first 16 terms of the sequence $-18, -15, -12, \ldots$

8. Find the sum of the terms of the arithmetic sequence $22, 25, 28, \ldots, 73$.

9. Find the sum of the terms of the arithmetic sequence $-29, -25, -21, \ldots, 91$.

10. How many terms of the arithmetic series $(-10) + (-7) + (-4) + \cdots$ must be added to give a sum of 200?

11. How many terms of the arithmetic series $25 + 19 + 13 + \cdots$ are required to give a sum of -20?

12. How many terms of the arithmetic series $95 + 90 + 85 + \cdots$ are required to give a sum of 0?

13. If $a_5 = 16$ and $a_{11} = 4$ in an arithmetic sequence, find the sum of the first 20 terms.

14. If $a_7 = 6$ and $a_{13} = 24$ in an arithmetic sequence, find the sum of the first 15 terms.

15. If $a_{13} = 7$ and $a_{17} = 23$ in an arithmetic sequence, find the sum of the first 20 terms.

16. In an arithmetic sequence, $a_{10} = 17x - 11y$ and $a_{15} = 7x - 6y$. Find a_{25} and the sum of the first 25 terms.

17. Find the sum of the integers 2 through 51.

18. Find the sum of the integers -59 through -16.

19. Find the sum of the even integers 38 through 62.

20. Find the sum of the odd integers 19 through 41.

21. Find the sum of all the positive multiples of 3 which are less than 100.

22. Find the sum of all the positive multiples of 5 which are less than 80.

23. Find the sum of all the even integers between 37 and 81.

24. Find the sum of all the odd integers 15 to 161, inclusive.

Arithmetic Series Homework   10/27/2017

1.
Answer: 840
CodePath: EAS.TRI.L.G.1

2.
Answer: −350
CodePath: EAS.TRI.L.G.3

3.
Answer: −1812
CodePath: EAS.TRI.L.G.6

4.
Answer: 294
CodePath: EAS.TRI.L.G.15

5.
Answer: 1968
CodePath: EAS.TRI.L.G.18

6.
Answer: 2394
CodePath: EAS.TRI.L.G.24

7.
Answer: 72
CodePath: EAS.TRI.L.G.30

8.
Answer: 855
CodePath: EAS.TRI.L.G.37

9.
Answer: 961
CodePath: EAS.TRI.L.G.39

10.
Answer: 16
CodePath: EAS.TRI.L.G.41

11.
Answer: 10
CodePath: EAS.TRI.L.G.43

12.
Answer: 39
CodePath: EAS.TRI.L.G.44

13.
Answer: 100
CodePath: EAS.TRI.L.G.57

14.
Answer: 135
CodePath: EAS.TRI.L.G.58

15.
Answer: −60
CodePath: EAS.TRI.L.G.60

16.
Answer: $-13x + 4y,\ 275x - 200y$
CodePath: EAS.TRI.L.G.63

17.
Answer: 1325
CodePath: EAS.TRI.L.G.70

18.
Answer: −1650
CodePath: EAS.TRI.L.G.71

19.
Answer: 650
CodePath: EAS.TRI.L.G.74

20.
Answer: 360
CodePath: EAS.TRI.L.G.77

21.
Answer: 1683
CodePath: EAS.TRI.L.G.81

22.
Answer: 600
CodePath: EAS.TRI.L.G.83

23.
Answer: 1298
CodePath: EAS.TRI.L.G.86

24.
Answer: 6512
CodePath: EAS.TRI.L.G.88