

Name: _____ Date: _____

Probability and Statistics Arithmetic and Geometric Series Worksheet

Find S_n for each arithmetic series described:

1. $a_1 = -121$
 $d = 3$
 $n = 43$

5. $a_1 = 2$
 $r = -3$
 $a_n = 162$

2. 5, 7, 9, ..., 27 when $n = 12$

6. $160 + 80 + 40 + \dots$ for 6 terms

3. -4, 1, 6, ..., 91 when $n = 20$

7. $a_1 = 8$
 $r = -2$
 $n = 7$

Find S_n of each geometric series described:

4. $6 + 18 + 54 + \dots$ for 6 terms

Find S for each infinite geometric series (if it exists):

8. $a_1 = 35$
 $r = \frac{2}{7}$

$$9. a_1 = 26$$

$$r = \frac{1}{2}$$

$$14. S = 90$$

$$r = \frac{-1}{2}$$

$$10. a_1 = 50$$

$$r = \frac{2}{5}$$

$$11. 6 + 4 + \frac{8}{3} + \dots$$

$$12. a_1 = 42$$

$$r = \frac{6}{5}$$

Find a_1 for each infinite geometric series described:

$$13. S = 64$$

$$r = \frac{-3}{4}$$