

Practice 11-5B

Name _____ HR _____

Decide whether each infinite geometric series *diverges* or *converges*. State whether each series has a sum.

1. $3 + \frac{3}{2} + \frac{3}{4} + \dots$

2. $4 + 2 + 1 + \dots$

3. $17 + 15.3 + 13.77 + \dots$

4. $6 + 11.4 + 21.66 + \dots$

5. $-20 - 8 - 3.2 - \dots$

6. $50 + 70 + 98 + \dots$

Evaluate the finite series for the specified number of terms.

7. $40 + 20 + 10 + \dots; n = 10$

8. $4 + 12 + 36 + \dots; n = 15$

9. $15 + 12 + 9.6 + \dots; n = 40$

10. $27 + 9 + 3 + \dots; n = 10$

11. $0.2 + 0.02 + 0.002 + \dots; n = 8$

12. $100 + 200 + 400 + \dots; n = 6$

Find r , then evaluate the infinite geometric series when possible.

13. $8 + 4 + 2 + 1 + \dots$

14. $1 + 2 + 4 + \dots$