

14.1 Practice ANSWER KEY

1. 486, 1458, 4374 diverges
2. 34, 47, 62 diverges
3. 9375, -46875, 234375 diverges
4. 1.1111, 1.11111, 1.111111 converges
5. 1, 5, 25, 125
6. 18, 48, 78, 108
7. 0, 3, 8, 15
8. $\frac{8}{3}, 2, \frac{8}{5}, \frac{4}{3}$ OR $\frac{8}{3}, \frac{8}{4}, \frac{8}{5}, \frac{8}{6}$
9. $0, \frac{3}{2}, 3, \frac{9}{2}$
10. -3, 15, -75, 375
11. 3, 12, 48, 192
12. 10, 6, 4, 3
13. $a_n = 4 \cdot 5^{n-1}$
14. $a_n = -9n + 38$
15. $a_n = \frac{n+1}{2}$
16. $a_n = n^2 + 1$
17. $a_n = -2 \cdot a_{n-1}$
 $a_1 = 3$

$$18. a_n = \frac{1}{4} a_{n-1}$$
$$a_1 = -3$$

$$19. a_n = 2 \cdot a_{n-1}$$
$$a_1 = -4$$

$$20. a_n = -\frac{1}{5} a_{n-1}$$
$$a_1 = 3$$

$$21. 261$$

$$22. 105$$

$$23. 49$$

$$24. 271$$

$$25. 224$$

$$26. 105$$

ANSWERS MAY VARY for 27 – 30

$$27. \sum_{k=1}^4 4^k$$

$$28. \sum_{k=1}^5 k^2$$

$$29. \sum_{k=301}^{306} k$$

$$30. \sum_{k=601}^{604} k$$