Review 12.1 – 12.2 Answers (exact, simplified)

NOTE: Answers to sequence or series problems are not always unique. So, if you got something different than the listed answer on a particular problem, be sure to ask about it.

1. 3, 6, 18, 72, 360

2a. $a_n = \frac{1}{2n-1}$

2b. $a_n = (-1)^{n-1}\left(\frac{n^2}{n+1}\right)$ **Note:** The $(-1)^{n-1}$ is a "toggle switch" technique that alternates the output from positive to negative to positive as required. You can use it, or variants of it, as needed for similar alternating sequences.

3. $\sum_{n=1}^{6}\left(\frac{2}{3}\right)^n$

4a. $\frac{25}{6}$

4b. 90

5a. $-1134\sqrt{2}$

5b. 55ln2 (with smallest integral argument)

6. 420 seats

7. $a_n = -16\left(\frac{1}{2}\right)^{n-1}$

8. $-\frac{27}{2}$

9. r = 3

10. $\frac{20475}{128}$

11. $\frac{422}{81}$