## Sequences

Find the general term of the sequences where the first term corresponds to n=1.

1. 
$$-1, 5, -7, 17, \dots$$

6. 
$$\frac{11}{9}$$
,  $\frac{21}{19}$ ,  $\frac{31}{29}$ ,  $\frac{41}{39}$ , ....

$$2. \ 0, -2, -6, -12, \dots$$

7. 
$$\frac{2}{1}$$
,  $\frac{2^4}{2}$ ,  $\frac{2^9}{3}$ ,  $\frac{2^16}{4}$ , ....

3. 
$$\frac{\sin 2}{1}$$
,  $\frac{\sin 4}{3!}$ ,  $\frac{\sin 6}{5!}$ ,  $\frac{\sin 8}{7!}$ , ....

8. 
$$\frac{-2!}{3}, \frac{3!}{5}, \frac{-4!}{7}, \frac{5!}{9}$$

4. 
$$\frac{1}{2}$$
,  $\frac{e}{6}$ ,  $\frac{e^2}{12}$ ,  $\frac{e^3}{20}$ , ....

9. 
$$2, \sqrt{7}, \sqrt{10}, \sqrt{13}, \dots$$

5. 
$$-2, \frac{4}{\sqrt{2}}, \frac{-8}{\sqrt{3}}, \frac{16}{\sqrt{4}}, \dots$$

10. 
$$\frac{4}{2}$$
,  $\frac{7}{4}$ ,  $\frac{12}{6}$ ,  $\frac{19}{8}$ , ....

©2012 Shmoop University, Inc. All rights reserved. For classroom use only. Want to print this out for your classroom? Go for it. All other reproduction and distribution is prohibited.