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## Introduction to Sequences

Find the next three terms of the sequence. Then describe in words the pattern of the sequence.

1. $4,10,16,22$, $\qquad$ , $\qquad$ , $\qquad$ . The pattern is: $\qquad$
2. $9,-1,-11,-21$, $\qquad$ , $\qquad$ , $\qquad$ . The pattern is: $\qquad$
3. $3,2, \frac{4}{3}, \frac{8}{9}$, $\qquad$ , $\qquad$ , $\qquad$ . The pattern is: $\qquad$
4. $2,6,18$, $\qquad$ , $\qquad$ , $\qquad$ . The pattern is: $\qquad$
5. (challenge) $4,8,12,20$, $\qquad$ , $\qquad$ , $\qquad$ . The pattern is: $\qquad$
6. Which of the sequences below is out of place? Explain your reasoning.
a. $1,9,17,25$,...
b. $-3,-6,-9,-12, \ldots$.
c. $100,50,25, \ldots$.
d. $20,30,40,50, \ldots$
7. Which of the sequences below is out of place? Explain your reasoning.
a. $3,10,101,10202, \ldots$
b. $2,-4,8,-16, \ldots$
c. $1,4,16,64$, ...
d. $300,100,33.3, \ldots$

Review from Math 1 and 2
8. List the first 4 terms of the sequence

START: 5
NEXT $=7$ NOW
9. List the first 4 terms of the sequence

START: 9
NEXT = NOW - 3
10. Each day Theo receives five dollars for walking his neighbor's dog. If he currently has $\$ 10$ in his wallet, how much will he have after 3 weeks of dog walking?

11. Ashley received $\$ 25$ for her good grades on her report card.

If she invests this money into an account that pays her $1 \%$ per week, estimate how much money she will have after 1 year.

