NAME _____ DATE _____ PERIOD _____

Patterns and Sequences
In-Class Practice

Describe the relationship between the terms in each arithmetic sequence. Then write the next three terms in each sequence.

1. 7, 19, 31, 43, …

12 is added to each term
55, 67, 79

2. 8, 18, 28, 38, …

10 is added to each term
48, 58, 68

3. 25, 26, 27, 28, …

1 is added to each term
29, 30, 31

4. 0.4, 0.8, 1.2, 1.6, …

0.4 is added to each term
2.0, 2.4, 2.8

5. 3.7, 3.7, 3.7, 3.7, …

0 is added to each term
3.7, 3.7, 3.7

6. 5.1, 6.2, 7.3, 8.4, …

1.1 is added to each term
9.5, 10.6, 11.7

7. 17, 31, 45, 59, …

14 is added to each term
73, 87, 101

8. 30, 50, 70, 90, …

20 is added to each term
110, 130, 150

9. 14, 41, 68, 95, …

27 is added to each term
122, 149, 176

NUMBER SENSE Find the 40th term in each arithmetic sequence.

10. 4, 8, 12, 16, …

160

11. 13, 26, 39, 52, …

520

12. 6, 12, 18, 24, …

240

13. GEOMETRY The lengths of the sides of a 6-sided polygon are an arithmetic sequence. The length of the shortest side is 3 meters. If the length of the next longer side is 5 meters, what is the length of the longest side?

3, 5, 7, 9, 11, 13

13 meters

14. FREE FALLING OBJECT A free falling object increases speed by a little over 22 miles per hour each second. The arithmetic sequence 22, 44, 66, …, represents the speed after each second, in miles per hour, of a dropped object. How fast is a rock falling after 8 seconds if it is dropped over the side of a cliff?

22
×8   — or —
176 mph

22, 44, 66, 88, 110, 132, 154, 176 mph