

Name _____

Number Patterns

COMMON CORE STANDARD CC.4.OA.5

Generate and analyze patterns.

Use the rule to write the first twelve numbers in the pattern.
Describe another pattern in the numbers.

1. Rule: *Add 8.* First term: 5

Think: Add 8.



5, 13, 21, 29, 37, 45, 53, 61, 69, 77, 85, 93

All the terms are odd numbers.

2. Rule: *Subtract 7.* First term: 95

3. Rule: *Add 15, subtract 10.* First term: 4

4. Rule: *Add 1, multiply by 2.* First term: 2

Problem Solving



5. Barb is making a bead necklace. She strings 1 white bead, then 3 blue beads, then 1 white bead, and so on. Write the numbers for the first eight beads that are white. What is the rule for the pattern?

6. An artist is arranging tiles in rows to decorate a wall. Each new row has 2 fewer tiles than the row below it. If the first row has 23 tiles, how many tiles will be in the seventh row?

Lesson Check (CC.4.OA.5)

- The rule for a pattern is *add 6*. The first term is 5. Which of the following numbers is a term in the pattern?
 - (A) 6
 - (B) 12
 - (C) 17
 - (D) 22
- What are the next two terms in the pattern 3, 6, 5, 10, 9, 18, 17, ...?
 - (A) 16, 15
 - (B) 30, 31
 - (C) 33, 34
 - (D) 34, 33

Spiral Review (CC.4.OA.4, CC.4.NBT.4, CC.4.NBT.5)

- To win a game, Roger needs to score 2,000 points. So far, he has scored 837 points. How many more points does Roger need to score? (Lesson 1.7)
 - (A) 1,163 points
 - (B) 1,173 points
 - (C) 1,237 points
 - (D) 2,837 points
- Sue wants to use mental math to find 7×53 . Which expression could she use? (Lesson 2.5)
 - (A) $(7 \times 5) + 3$
 - (B) $(7 \times 5) + (7 \times 3)$
 - (C) $(7 \times 50) + 3$
 - (D) $(7 \times 50) + (7 \times 3)$
- Pat listed numbers that all have 15 as a multiple. Which of the following could be Pat's list? (Lesson 5.4)
 - (A) 1, 3, 5, 15
 - (B) 1, 5, 10, 15
 - (C) 1, 15, 30, 45
 - (D) 15, 115, 215
- Which is a true statement about 7 and 14? (Lesson 5.4)
 - (A) 7 is a multiple of 14.
 - (B) 14 is a factor of 7.
 - (C) 14 is a common multiple of 7 and 14.
 - (D) 21 is a common multiple of 7 and 14.