

PROBLEM SOLVING

Lesson 5.3

Name _____

Problem Solving • Common Factors

COMMON CORE STANDARD CC.4.OA.4

Gain familiarity with factors and multiples.

Solve each problem.

1. Grace is preparing grab bags for her store's open house. She has 24 candles, 16 pens, and 40 figurines. Each grab bag will have the same number of items, and all the items in a bag will be the same. How many items can Grace put in each bag?

**Find the
common factors
of 24, 16, and 40.**

1, 2, 4, or 8 items

2. Simon is making wreaths to sell. He has 60 bows, 36 silk roses, and 48 silk carnations. He wants to put the same number of items on each wreath. All the items on a wreath will be the same type. How many items can Simon put on each wreath?

3. Justin has 20 pencils, 25 erasers, and 40 paper clips. He organizes them into groups with the same number of items in each group. All the items in a group will be the same type. How many items can he put in each group?

4. A food bank has 50 cans of vegetables, 30 loaves of bread, and 100 bottles of water. The volunteers will put the items into boxes. Each box will have the same number of food items and all the items in the box will be the same type. How many items can they put in each box?

5. A debate competition has participants from three different schools: 15 from James Elementary, 18 from George Washington School, and 12 from the MLK Jr. Academy. All teams must have the same number of students. Each team can have only students from the same school. How many students can be on each team?

Lesson Check (CC.4.OA.4)

1. What are all the common factors of 24, 64, and 88?
 (A) 1 and 4
 (B) 1, 4, and 8
 (C) 1, 4, 8, and 12
 (D) 1, 4, 8, and 44
2. Which number is NOT a common factor of 15, 45, and 90?
 (A) 3
 (B) 5
 (C) 10
 (D) 15

Spiral Review (CC.4.NBT.5, CC.4.NBT.6)

3. Dan puts \$11 of his allowance in his savings account every week. How much money will he have after 15 weeks?
(Lesson 3.4)
 (A) \$165
 (B) \$132
 (C) \$110
 (D) \$26
4. James is reading a book that is 1,400 pages. He will read the same number of pages each day. If he reads the book in 7 days, how many pages will he read each day? (Lesson 4.4)
 (A) 20
 (B) 50
 (C) 140
 (D) 200
5. Emma volunteered at an animal shelter for a total of 119 hours over 6 weeks. Which is the best estimate of the number of hours she volunteered each week?
(Lesson 4.5)
 (A) 10 hours
 (B) 20 hours
 (C) 120 hours
 (D) 714 hours
6. Which strategy can be used to multiply 6×198 mentally? (Lesson 2.8)
 (A) $6 \times 198 = (6 \times 19) + (6 \times 8)$
 (B) $6 \times 198 = (6 \times 200) + (6 \times 2)$
 (C) $6 \times 198 = (6 \times 200) - (6 \times 2)$
 (D) $6 \times 198 = (6 + 200) \times (6 + 2)$