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4.OA.A.2 Solving Word Problems

4.OA.A.2: Multiply or divide to solve word problems involving multiplicative comparison.

1. Pierre counted all his crayons and found out that he has 63 crayons, which he will store in boxes. Each box can hold 7 crayons. How many boxes will he need?

   a. What do you have to find?

   Solution:

   b. Use repeated subtraction to find the number of boxes needed to store all his crayons.

   Solution:

   c. Write the fact family for 7, 9, and 63. Which number sentence can help solve the problem?

   Solution:

   d. Does division make it easy to solve the problem? How?

   Solution:

   e. How many boxes does Pierre need to store all his crayons?

   Solution:

2. Merryl says that 2×4 and $4 \div 2$ are in the same fact family. Explain why she is wrong.

   Solution:

3. Sally reads an average of 8 pages in an hour. Danielle reads an average of 6 pages in an hour. They read together and has read a total of 70 pages when combined. How many hours did they read together?

   Solution:

4. Sarah is inviting her 7 close friends to her party. She has 28 cookies. How many cookies will each of her friend get?

   A. 28
   B. 7
   C. 4
   D. None of the above

   Solution:

5. There are 4 students in a class and 36 books. If the books are divided equally among the students, how many does each student get?

   A. 9
   B. 4
   C. 36
   D. None of the above

   Solution:

6. Nash has 3 sets of marbles. Each set contains 8 marbles. He decides to make sets of 6 marbles. How many sets does he make?

   Solution:

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Answer Key

1. Pierre counted all his crayons and found out that he has 63 crayons, which he will store in boxes. Each box can hold 7 crayons. How many boxes will he need?

a. What do you have to find?

Solution:
I have to find the number of boxes Pierre will need.

b. Use repeated subtraction to find the number of boxes needed to store all his crayons.

Solution:
63 – 7 – 7 – 7 – 7 – 7 – 7 – 7 – 7 – 7 = 0; 9 boxes are needed to store all his crayons.

c. Write the fact family for 7, 9, and 63. Which number sentence can help solve the problem?

Solution:
7 × 9 = 63, 9 × 7 = 63, 63 ÷ 7 = 9, 63 ÷ 9 = 7; 63 ÷ 7 = 9 can help solve the problem

d. Does division make it easy to solve the problem? How?

Solution:
Yes, 63 ÷ 7 = 9 is easier than sentence written in part b.

e. How many boxes does Pierre need to store all his crayons?

Solution:
Pierre needs 9 boxes to store all his crayons.

2. Merryl says that 2 × 4 and 4 ÷ 2 are in the same fact family. Explain why she is wrong.

Solution:
2 × 4 = 8 belongs to the fact family of 2, 4, and 8 while 4 ÷ 2 = 2 belongs to the fact family of 2, 2, and 4.

3. Sally reads an average of 8 pages in an hour. Danielle reads an average of 6 pages in an hour. They read together and has read a total of 70 pages when combined. How many hours did they read together?

Solution:
5 × 8 = 40; 5 × 6 = 30
40 + 30 = 70 pages
Answer: 5 hours

4. Sarah is inviting her 7 close friends to her party. She has 28 cookies. How many cookies will each of her friend get?

A. 28
B. 7
C. 4
D. None of the above

Solution:
C. 4

5. There are 4 students in a class and 36 books. If the books are divided equally among the students, how many does each student get?

A. 9
B. 4
C. 36
D. None of the above

Solution:
A. 9

6. Nash has 3 sets of marbles. Each set contains 8 marbles. He decides to make sets of 6 marbles. How many sets does he make?

Solution:
3 × 8 = 24; 24 ÷ 6 = 4
Answer: 4 sets