Puzzles for Grade 4-5 Workshop

4th Grade Puzzles

1. Coin Puzzles
Mary has 30 coins worth $2.70 in her pocket. How many of each type of coin does she have if she has only nickels and dimes?

2. A Basket of Fruit
Mary has a basket of cherries. If she counts them by 3's, she has 2 left over. If she counts them by 5's, she has 4 left over. How many cherries are there? (There is more than one possible answer.)

3. Sums and Differences
Find two numbers that add to 24 and subtract to 14.

4. Halfway Between
a) What number is halfway between 45 and 61?
b) What number is halfway between 420 and 480?

5. Products, Sums and Differences
Find two numbers that multiply to 48 and…
i) add to 14.
ii) add to 16.
iii) add to 26.

6. Missing-Digit Arithmetic
Fill in the missing digits (indicated by "?").

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   ?3
 x 5?
  3?2
+ ??50
  ??8?
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7. Money Problems
For her birthday party, Janet bought 3 pints of ice cream. A pint of ice cream costs $3.69, and she had to pay $0.46 in tax. How much change did she get back if she gave the cashier $21.53?

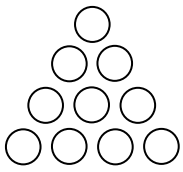
8. Measurement Problems
A board that is 20-feet long is cut into 16 equally long pieces. How long is each piece?

9. Favorite Numbers
If Jill subtracts 7 from her favorite number, multiplies by 10, and adds 7, the result is 47. What is her favorite number?

5th Grade Puzzles

10. Pets' Legs
All of Jane's pets are either cats or birds. How many cats and birds does Jane have if she has 10 pets and they have a total of 32 legs?

11. Triangle Flipping
How can you move only three of the coins and end up with the same triangle, but upside down?



12. Enough Children
What is the least number of children someone could have such that every child would have at least two brothers and at least two sisters?

13. Counting Racers
The organizer of a race notices that if she divides the total number of racers into groups of 4, there are two left over, and if she divides them into groups of 3, there is one left over. How many racers are there? (There is more than one possible answer.)

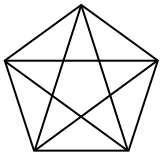
14. A Clock Riddle
Cathy said to her friend, "Fifteen minutes ago, it was twice as many minutes after 4 o'clock as it is now before 5 o'clock." What time was it when Cathy said that?

15. A 4x4 Magic Square
Fill in the rest of the empty boxes of the magic square such that each row, column, and diagonal have a magic sum equal to 50. Also, the four corners, and the middle four cells should add to 50.

7			12
	8	23	5
9	16		

16. Age Puzzles Next year, Jimmy will be double Betty's age. How old will Jimmy be in 10 years, if Betty is 7 now?

17. Counting Triangles
How many triangles are there in this figure?



Solutions

1. Coin Puzzles
24 dimes and 6 nickels

2. A Basket of Fruit
The possible answers are one less than multiples of 15 (e.g., 14, 29, 44, 59, etc.).

3. Sums and Differences
19 and 5

4. Halfway Between
a) 53
b) 450

5. Products, Sums and Differences
i) 6 and 8
ii) 12 and 4
iii) 24 and 2

6. Missing-Digit Arithmetic

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  83
x 54
 332
+4150
4482
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7. Money Problems
$10.00

8. Measurement Problems
15 inches, or 1' 3"

9. Favorite Numbers
11

10. Pets' Legs
Six cats and four birds

11. Triangle Flipping
Move the two bottom outside coins up two rows, and move the top coin to just below the bottom row (but keep it in the center).

12. Enough Children
There would need to be at least six children – three girls and three boys.

13. Counting Racers
The possible answers are two less than multiples of 12 (e.g., 10, 22, 34, 46, etc.).

14. A Clock Riddle
The answer is 4:45. Fifteen minutes ago it was 30 minutes after 4 o'clock. Now it is 15 minutes before 5 o'clock.

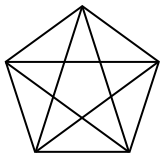
15. A 4x4 Magic Square

7	20	11	12
14	8	23	5
20	6	13	11
9	16	3	22

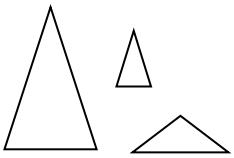
16. Age Puzzles
Jimmy will be 25 years old.

17. Counting Triangles

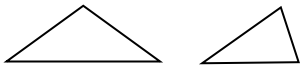
Given that the original shape and size is this:



There are five triangles of each of these shapes and sizes:



There are ten triangles of each of these shapes and sizes:



Therefore, there are a total of 35 triangles.