

Oak Grove Math Superstars

Due Dates:



Session	Last Monday of
1	September
2	October
3	November
4	January
5	February
6	March

Grade 2

Session 4 - Answers

(50 points total; 10 points deducted if late)

5 points for each correct answer, unless specified otherwise; 1 point if answer incorrect, but work shown:

1. A girl has 60 cents in nickels and dimes. She has the same number of nickels and dimes. How many of each coin does she have? **Answer: 4 coins or 4 nickels and 4 dimes since $4 \times 5 + 4 \times 10 = 60$. {5 points if give correct answer, 2 points if answer is 6 dimes and no nickel, 2 points if answer is 12 nickels and no dimes; otherwise, 1 point for trying}**

2. The 2nd grade class got to watch a movie together. 30 children left during the 1st hour. 17 came in during the 2nd hour. There were 86 children when the movie was over. How many were there at the beginning? **Answer: 99 children since $86 - 17 + 30 = 99$ {5 points if give correct answer; otherwise, 1 point for trying}**

3. Adam spent 5 days preparing for a test. The 1st day he solved 1 problem, and on each consecutive day he solved twice as many problems as the day before. How many problems did Adam solve altogether? **Answer: 31 problems since summing by each day we get $1 + 2 \times 1 + 2 \times (2 \times 1) + 2 \times (2 \times (2 \times 1)) + 2 \times (2 \times (2 \times (2 \times 1))) = 1 + 2 + 4 + 8 + 16 = 31$ {5 points if give correct answer; 4 points if 30 problems; 3 points if 28 problems; otherwise, 1 point for trying}**

4. Matthew and Clara live in a skyscraper. Clara lives 12 floors above Matthew. One day Matthew went to visit Clara, and he took the stairs up from his apartment to Clara's apartment. Half-way up, he was on the 8th floor. On what floor does Clara live?

- A) 12 B) 14 C) 16 D) 20 E) 24

Answer: 14th floor since half-way is equivalent to 6 floors thus Clara lives 6 floors above the 8th floor = $6+8 = 14^{\text{th}}$ floor. {5 points if give correct answer; 3 points if 20th floor; 2 points if 12th floor; otherwise, 1 point for trying}

5. Mrs. Albright's class needs 150 napkins for Club Day. A small package of 50 costs 99c and a large package of 150 costs \$2.75. How much will they save by buying the larger package? Answer: 0.22 or 22 cents since $150 / 3 \times 0.99 - 2.75 = 2.97 - 2.75 = 0.22$ or 22 cents {5 points if give correct answer; 2 points if 2.97; otherwise, 1 point for trying}

6. A magician weighed his twin rabbits and the matching hats together and they weigh a total of 18 lbs. One hat weighs 3 lbs. What is the weight of one rabbit? Answer: 6 lbs since $(18 - 3 - 3) / 2 = 12/2 = 6$ lbs {5 points if give correct answer; 3 points if 12lbs; otherwise, 1 point for trying}

7. Kim is building a rectangular patio. The width is 10 feet and the perimeter is 60 feet. What is the length? Answer: 20 feet since $(60 - 10 - 10) / 2 = 20$ feet {5 points if give correct answer; 3 points if 40 feet; otherwise, 1 point for trying}

8. Find the values of @ and \$. Use the 2 number sentences for clues.

$$@ + @ + \$ = 12 \text{ and}$$

$$\$ + \$ + @ = 15$$

Answer: @ = 3 and \$ = 6 since $3 + 3 + 6 = 12$ and $6 + 6 + 3 = 15$ {5 points if give correct answer; 3 points if only one of the sentences is verified for instance if @ = 5 and \$ = 2 then $5+5+2 = 12$ but $2+2+5=9 \neq 15$; otherwise, 1 point for trying}

9. In the morning the thermometer shows it is 13 degrees below zero. Later it will only rise to 22 degrees. What is the total gain in temperature? Answer: 35 degrees since $22 - (-13) = 35$ degrees {5 points if give correct answer; 2 points if 9 degrees; otherwise, 1 point for trying}

10. A librarian asks Anna, Beata and Jack to guess the number of books in the library. Anna said 2010, Beata said 1998, and Jack said 2015. It turned out that the number of books in the library differed from the numbers given by the children by 12, 7 and 5 (these numbers are not necessarily in the order they made their guesses). How many books are there in the library? **Answer: 2003 books since $2015 - 12 = 2010 - 7 = 1998 + 5 = 2003$ books {5 points if give correct answer; 2 points if 1998 books; otherwise, 1 point for trying}**