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 3 - 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. Megan is two years younger than Amanda. The sum of their ages is 14. How old is Megan? {5 points if give correct answer of 6, 2 points if answer is 8 otherwise 1 point for trying}
   Megan (M) is 6 years old. Amanda (A) = M + 2 = 8 and A + M = 8 + 6 = 14

2. Find the mystery number {?} using the relationships below:
   a. 28:7 20:5 16:4 12:?

   {5 points if give correct answer, 2 points if give ?=4 otherwise 1 point for trying}

   28:7 = 4, 20:5 = 4, 16 :4 = 4 thus 12:x = 4 or x = 12:4 = 3 so ? = 3

3. A fence has 6 poles from one end to another. The poles are 10 feet apart. How long is the fence? {5 points if give correct answer, 2 points if give 60 feet otherwise 1 point for trying}
   Let pole = P. Thus the fence looks like P–P–P–P–P–P with - = 10 feet thus in total, the fence is 5 times – or 5 times 10 = 50 feet

4. Mental Math Challenge: {1 point for each correct, 5 points if all correct}

   a) 100-99 = 1000- _____
   b) 999-99 = 100 + _____

   solution:
   a) 100-99 = 1000- _999_
   b) 999-99 = 100 + _800_

c) 1999-1000 = 99 + ____
d) 900+99 = 1000 - _____

c) 1999-1000 = 99 + _900_
d) 900+99 = 1000 - _1_

5. Sebastian read 27 books. The books were chapter books or picture books. He read twice as many chapter books as picture books. How many of each type did he read?

   {5 points if give correct answer, 4 points if give Picture = 18 books and Chapter = 9 books, 2 points if give only one of both correctly, otherwise 1 point for trying}

   Chapter = 18 books, Picture = 9 books

6. What is the perimeter of a rectangle that has one side as 4 feet, and another side as 5 feet?

   {5 points if give correct answer, 2 points if give 9 feet otherwise 1 point for trying}

   2 x 4 + 2 x 5 = 18 feet

7. How many right angles are in the word "HALL"?

   {5 points if give correct answer, 4 points if answer is 5, 3 points if answer is 4, 2 points if answer is 3, otherwise 1 point for trying}

   H has 4 right angles, both L have one each for a total of 6 right angles

8. Jia and Ruby are painting a fence. Jia paints 2/8 of the fence, Ruby paints 3/8. Together, did they paint more than half the fence? Show your work.

   {5 points if give correct answer, 2 points if answer is half, otherwise 1 point for trying}

   Jia + Ruby = 2/8 + 3/8 = 5/8 of the fence. Since half of the fence is the same as 4/8 of the fence and 5/8 is greater than 4/8 then yes, they painted more than half of the fence.

9. Jamal has a bag of coins: 2 red, 3 yellow and 1 green. What is the probability that Jamal will pick a red coin if he takes one without looking?

   {5 points if give correct answer 2/6 or 1/3, 2 points if answer is either 3/6 (or ½) or 1/6, otherwise 1 point for trying}

   $$Prob(pick\ one\ red\ coin) = \frac{number\ of\ red\ coins}{number\ of\ total\ coins} = \frac{2}{2+3+1} = \frac{2}{6} = \frac{1}{3}$$

10. A baby whale can have 300 ml of milk each day. In how many days will the baby whale have 1.5 L of milk? Note: 1000 ml = 1L

    {5 points if give correct answer, 4 points if answer is 4 days, 3 points if answer is 3 days, 2 points if answer is 2 days, otherwise 1 point for trying}

    1.5 L = 1500 ml. Since have 300ml in one day, the number of days to have 1500 ml = $\frac{1500\ \text{ml}}{300\ \frac{\text{ml}}{\text{day}}} = 5\ \text{days}$