**Fiji Mathematics Team Competition - Finals**

**YEAR 7 – 2017**

Y7/1 Each school bus can hold a maximum of 44 passengers. How many school busses are needed to transport 334 students and 28 adults as passengers?

Y7/2 What is the value of ?

Y7/3 Three friends have a total of 1000 marbles altogether. The first friend has 100 more than the second. The second friend has 300 more than the third. How many marbles has the third friend?

Y7/4 Ram Singh the millionaire started with $500 in her pocket the day he turned 20. Since then, his assets have doubled each year on his birthday. How old was he the first time he was a millionaire on his birthday?

Y7/5 A game began at 10:50 am and ended at 1:20pm. How many minutes long was the game?

Y7/6 The positive integers are written in rows, as shown. The first number in a row equals the number of integers in that row. Continuing this pattern in which row number will 2016 appear?

Row 1: 1

Row 2: 2 3

Row 3: 4 5 6 7

Row 4: 8 9 10 11 12 13 14 15

Y7/7 The surface area of a cube is 150 square centimeters. How many cubic centimeters is the volume of the cube?

Y7/8 In a televised quiz show, one wins 250 points for a correct answer, but loses 150 points for an incorrect answer. Sera replied to 15 questions and obtained 2150 points. How many correct answers did she give?

Y7/9 324 is a perfect square. What is the next perfect square number?

Y7/10 Jone spent 40% of all allowance on candy, and gave 30% of the remainder to his sister. How much of all allowance does he have left?

Y7/11 A palindrome is an integer that reads the same forward and backwards. For example, 31213 is a 5 digit palindrome. How many 3 digit palindromes are even?

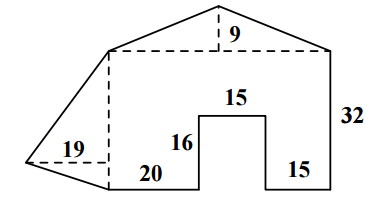
Y7/12 Every student in a school studies either mathematics or physics. Two-thirds of the students study mathematics and one-half of the students study physics. If seven students study both subjects, what is the total number of students in the school?

Y7/13 A sequence is formed in the following way: The first two numbers of the sequence are 1 and 3. Each subsequent number is the sum of the previous two members of the sequence. What is the third **even** number of the sequence?

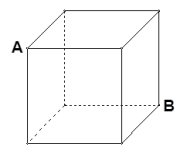
Y7/14 On her birthday, Sikiti received an aquarium of length 48cm and width of 30cm. She filled the tank with water to height 28cm. How many fish can Sikiti buy if each fish needs 1000 cm3 of water to live?

Y7/15 If Ω = the set of letters in the word WESTERN, β = the set of letters in the word PARENT, and µ = the set of letters in the word WAGON, evaluate the set

Y7/16 If what is the value of



Y7/17 Find the surface area of the figure shown:

Y7/18 In the shown cube, A and B are on opposite corners and each side of the cube has length one. An ant walks from A to B along the edges of the cube. What is the length of the longest path the ant can walk, without using any edge more than once nor passing twice through the same corner?

Y7/19 What is the sum of all numbers between 1 and 100 which are multiples of 7?

Y7/20 If a car travels at a speed of 30 meters per second, what is its speed in kilometers per hour?

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Tie Breaker

Y7/21 Tom is in room 1401. He calls Peter and says “what room are you in?” Peter replies: “the number of the room I’m in less the number of the room you’re in is 100 times the nth prime number, where n is the smallest number with six positive factors”. What room is Peter in? (If n = a × b, then a and b are said to be factors of n. The positive factors of 6 are 1, 2, 3, 6).

Y7/22 A newspaper vendor receives a salary of $10 per week plus 5 cents for each newspaper sold. How many papers must he sell to make $25 in a week?

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