**Fiji Mathematics Team Competition – National Final**

**Form 3 -2013**

F3/1 142 minutes after 11:00 am is how many minutes before 2:00 pm?

F3/2 A teacher is buying stickers, each with a number on it, so that all 100 chairs

in the school hall can be numbered from one to hundred. How many stickers with a figure 7 have to be bought?

F3/3 If 7x + 12 = 26, then 14x + 24 =

F3/4 What is the sum of the first five non-prime positive integers?

F3/5 My friend and I went to celebrate her birthday at a restaurant. The bill for the lunch for the two of us came to be $25.50. My friend paid the bill by credit card and I left a $2.50 tip in cash. We agreed to share the total cost equally. How much do I owe my friend?

F3/6 The base of a rectangle exceeds its height by 4 cm. Its perimeter is 40 cm. Calculate the

area of the rectangle.

F3/7 The average of four test marks was 60. The first three marks were 30, 55 and 65. What

was the fourth mark?

F3/8 Using 10 pounds of grain, how many pigs can be fed along with 20 chickens

provided that one pound of grain can feed five chickens or one pound of grain

can feed two pigs?

F3/9 At a university’s graduation ceremony, 690 names are to be read at a pace of

one name every 10 seconds. How many minutes will it take to read all of the

names?

F3/10 The length of the side of square A is half the length of the side of square B. What is

the ratio of the perimeter of square A to the perimeter of square B?

F3/11 From an 8x8x8 cube, a 2x2x2 cube is removed from each corner.

What fraction of the 8x8x8 cube is removed?

F3/12 Ninety-six increased by 25% is the same as what number decreased by 25%?

F3/13 Debra completely fills her mug with a mixture that is 15 ml of hot chocolate and 35 ml

of cream. What percent of the mixture is hot chocolate?

F3/14 Seven packs of *Fish Fries* and four packs of *French Fries* cost $78.00. *French Fries*

costs $3.00 more per pack than *Fish Fries*. In dollars, how much does a pack of *French Fries* cost?

F3/15 In an election, Hemant received 60% of the votes and Jeena received all the rest. If

Hemant won by 24 votes, how many people voted?

F3/16 A square is cut into three rectangles of equal area by two lines that are parallel to one

of the sides of the square. If the perimeter of each of the three rectangles is 24 cm, then what is the perimeter of the original square?

F3/17 Farmer George has fewer than 100 pigs on his farm. If he groups the pigs five to

a pen, there are always three pigs left over. If he groups the pigs seven to a pen, there is always one pig left over. However, if he groups the pigs three to a pen, there are no pigs left over. What is the greatest number of pigs that Farmer George could

have on his farm?

F3/18 Harriet Hare and Turbo Tortoise want to cross the finish line together on their 12 mile

woodland race. Turbo sets off at 8:15a.m and trots at a constant speed of 4 mph.

Given that Harriet runs at a constant speed of 8 mph, at what time should she set off?

F3/19 In the diagram, *ABC* represents a triangular jogging path. Ravi jogs along the path

from *A* to *B* to *F*. Manish jogs from *A* to *C* to *F*. Each boy jogs the same distance. The

distance from *F* to *B*, in metres, is

C

120m .. F

A 160m B

F3/20 In the diagram, four equal circles fit perfectly inside a square; their centres are the vertices

of the smaller square. The area of the smaller square is 4cm2. What is the area of the larger square?

Tie Breaker:

F3/21 The unit digit of the product 11 x 13 x 15 is

F3/22 A factory manufactures dresses and shirts; 3 dresses are manufactured for every 4 shirts. In a week the factory produced a total of 420 dresses and shirts. How many of these were dresses?