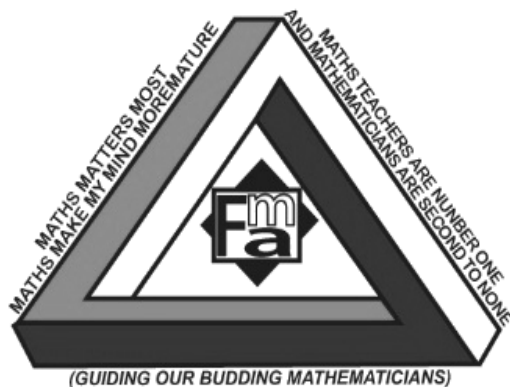


# **FIJI MATHEMATICS ASSOCIATION**



## **FIJI MATHEMATICS COMPETITION (FMC) YEAR 8**

**Thursday 1<sup>st</sup> September 2016**

**Time Allowed: 1 Hour 15 minutes**

**Note:**

**Calculators are NOT permitted.**

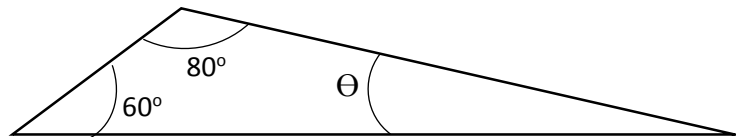
**Diagrams are NOT drawn to scale.**

### **Instructions:**

1. Print your **Name** in the space provided and Shade the circle corresponding to your **Year** on the answer sheet.
2. Shade the circle corresponding to your answer with dark pencil on the answer sheet provided.
3. Multiple answers **will not be** accepted.


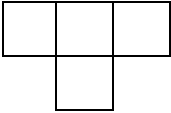
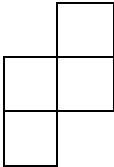
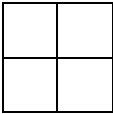
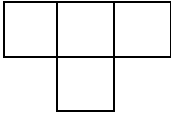
## Year 8

- The value of  $3 + 7 + 8 + 12$  is  
A. 20                      B. 21                      C. 29                      D. 30                      E. 31
- $1.1 \times 0.7$  equals  
A. 77                      B. 7.7                      C. 0.77                      D. 0.707                      E. 7.07
- Write the scientific notation of  $3000 \times 1000$   
A.  $3 \times 10^6$                       B.  $3 \times 10^4$                       C.  $3 \times 10^3$                       D.  $3 \times 10^5$                       E.  $3 \times 10^8$
- Which of the following lies between 5.3 and 5.6  
A. 5.2                      B. 5.9                      C. 5.05                      D. 5.41                      E. 5.61
- If you have 50 c, \$2 and \$1 coins, in how many ways can you make up \$10?  
A. 21                      B. 36                      C. 30                      D. 33                      E. 35
- A mathematics teacher brought some lollies to her class. After giving 2 lollies each to 15 students who had completed their homework, she has 60 lollies left with her. How many lollies did she bring to the class?  
A. 15                      B. 45                      C. 90                      D. 105                      E. 30
- $10^3 + 10^2 + 10 + 1$  is equal to  
A. 1111                      B. 1110                      C. 1011                      D. 1010                      E. 1001
- Which of these numbers is a prime number?  
A.  $71 + 1$                       B.  $71 \times 1$                       C.  $71 + 71$                       D.  $71 \times 71$                       E.  $71 - 1$
- In the diagram the value of  $\theta$  is



- A. 120                      B. 140                      C. 40                      D. 50                      E. 60
- A box weighs 242 kg when full and 188 kg when half full. How much does it weigh, in kilograms, when empty?  
A. 94                      B. 268                      C. 134                      D. 54                      E. 108
  - Arrange the numbers 36, 12, 29, 21, 7 in ascending order.  
A. 36, 29, 21, 12, 7                      B. 7, 12, 21, 29, 36                      C. 36, 29, 7, 21, 12  
D. 7, 36, 12, 29, 21                      E. 7, 12, 21, 36, 29

## Year 8

12. At 3:00 pm, the angle between the big hand and the small hand on a clock is exactly  $90^\circ$ . Ten minutes later, the acute angle between the hands will be  
 A.  $45^\circ$                       B.  $35^\circ$                       C.  $15^\circ$                       D.  $70^\circ$                       E.  $30^\circ$
13. Calculate  $25 + 5 \div 5 - (3 \times 2)$   
 A. 0                      B. 6                      C. 25                      D. 20                      E. 26
14. The number halfway between  $\frac{1}{4}$  and  $\frac{1}{16}$  is  
 A.  $\frac{5}{32}$                       B.  $\frac{1}{8}$                       C.  $\frac{5}{16}$                       D.  $\frac{1}{12}$                       E.  $\frac{7}{32}$
15. All of the figures below are made up from four squares of equal area. Which figure has a perimeter which is different from the others?
- A.                       B.                       C. 
- D.                       E. 
16. Kunatani has a suitcase which measures 70 cm x 50 cm x 30 cm. Given that one cubic centimetre equals one millilitre, what is the volume, in litres, of Kunatani's suitcase?  
 A. 105                      B. 10.5                      C. 1050                      D. 10 500                      E. 105 000
17. The winner of the 'Billibilli' race travelled 11 km in 15 minutes. The winner's average speed, in kilometres per hour, is :  
 A. 165                      B. 150                      C. 66                      D. 44                      E. 0.67
18. Osea rolls two dice with the numbers 1 to 6 on each one and obtains a total of 9. Which of the following numbers could not have been rolled?  
 A. 2                      B. 3                      C. 4                      D. 5                      E. 6
19. A survey of a village devastated by cyclone Winston was taken. Out of 30 families surveyed, it was found that 20 families had food, 18 had shelter and 9 had both. How many families had neither food nor shelter?  
 A. 0                      B. 1                      C. 2                      D. 3                      E. 4
20. 0.35 in the most simplified form is:  
 A.  $\frac{35}{100}$                       B.  $\frac{7}{200}$                       C.  $\frac{7}{2}$                       D.  $\frac{7}{20}$                       E.  $\frac{35}{10}$

## Year 8

21. Find the discounted price if \$90 is discounted by 5%
- A. \$4.50                      B. \$85.50                      C. \$94.50                      D. \$80.00                      E. \$86.50
22. How much water is added to 750 g milk to get 1 Kilogram mixture of liquid?
- A. 2.5 Kg                      B. 0.25 Kg                      C. 20.5 Kg                      D. 25 Kg                      E. 0.025 Kg
23. A large watermelon weighs 20 kg, with 98 % of its weight being water. It is left to stand in the sun, and some of the water evaporates so that now only 95 % of its weight is water. What does it now weigh?
- A. 17 kg                      B. 19.4 kg                      C. 10 kg                      D. 19 kg                      E. 8kg
24. A long rope has to be cut to make 23 small pieces. If it is double folded to start with, how many times does it need to be cut?
- A. 9                      B. 23                      C. 11                      D. 12                      E. 13
25. On a twenty – four – hour digital clock whose display ranges from 00 : 00 to 23 : 59 , how many times during one day does the display show a palindrome?(A palindrome is a number that is the same forwards as backwards, for example 02 : 20 , 23 : 32 .)
- A. 12                      B. 16                      C. 17                      D. 18                      E. 20
26. 9 men eat 27 rotis. How many rotis will be needed for 15 men
- A. 30                      B. 40                      C. 45                      D. 50                      E. 60
27. Lisa collected 50 seashells over a period of five days. Each day she collected three more than she had collected the day before. How many shells did she collect on the fifth day?
- A. 10                      B. 16                      C. 50                      D. 47                      E. 13
28. A secondary school has a rectangular playing field. The length and breadth of the playing field is increased by 20%.What is the percentage increase in the area of the playing field?
- A. 40                      B. 44                      C. 144                      D. 400                      E. 20
29. Solve  $2(6m + 7) = 50$
- A.25                      B.43                      C.3                      D.6                      E.18
30. In the year 8 classroom, the desks are arranged in equal rows. Phil sits at the desk that is fourth from the front and third from the back. There are four desks on the right of Phil's desk but only one to the left. How many desks are there in the room?
- A. 26                      B.25                      C. 30                      D. 36                      E. 49