

# FIJI MATHEMATICS ASSOCIATION



## FIJI MATHEMATICS COMPETITION (FMC) YEAR 6

**Wednesday 6<sup>th</sup> September 2017**

**Time Allowed: 1 Hour 15 minutes**

**Note:**

**Calculators are NOT permitted.**

**Diagrams are NOT drawn to scale.**

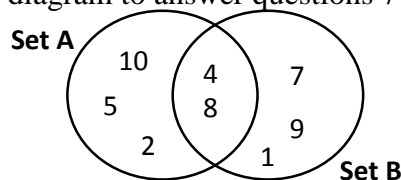
**Instructions:**

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

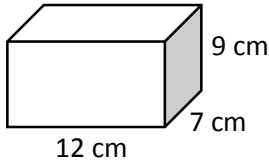
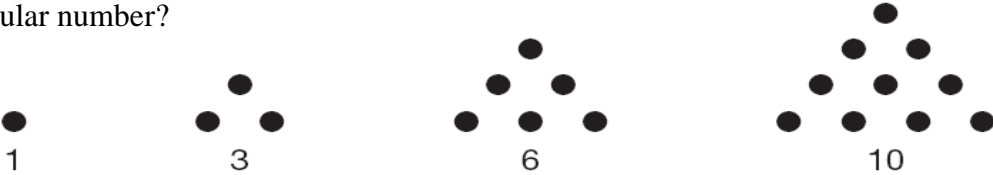
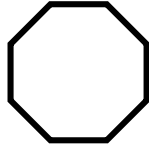
## Year 6

- Convert 56437 metres in to kilometres  
A. 5643.7 km      B. 564.37 km      C. 56.437 km      D. 5.6437 km      E. 0.56437 km
- 1 blue, 1 black, 1 red and 2 green marbles are placed in a box. Jone is asked to pick 1 marble with his eyes closed. What are the chances that Jone will pick a green marble.  
A. 10%      B. 20%      C. 30%      D. 40%      E. 2%
- Angle greater than  $180^\circ$  is known as:  
A. Large Angle      B. Reflex Angle      C. Acute Angle      D. Obtuse Angle      E. Right Angle
- 9:46 pm expressed in 24 hour clock is  
A. 2146 hours      B. 0946 hours      C. 2046 hours      D. 1946 hours      E. 21:46 hours
- 768,942 written in words is  
A. Seven sixty eight thousand nine hundred and forty two.  
B. Seven hundred thousand and sixty thousand eight thousand nine hundred and forty two.  
C. Seventy six hundred thousand eighty nine hundred and forty two.  
D. Seventy six hundred thousand eight thousand nine hundred and forty two.  
E. Seven hundred and sixty eight thousand nine hundred and forty two.
- Which set has all the prime factors of 84?  
A. {2,3,7}      B. {2,2,3,7}      C. {4,3,7}      D. {2,2,21}      E. {4,21}

Use the Venn diagram to answer questions 7 and 8.



- What is the cardinal number for the Set A?  
A. 6      B. 7      C. 8      D. 5      E. 3
- Which set of numbers represent  $A \cap B$   
A. 1,2,4,5,7,8,9,10      B. 2,4,5,8,10      C. 1,4,7,8,9  
D. 4,8      E. 1,2,5,7,9,10
- A chartered airplane flew 156,983.54 km to its first destination. After refuelling it flew to the next destination 89,421.91 km. After picking a few passengers it flew another 45,195.30 km. What was the total distance that the airplane flew?  
A. 165,452.75 km      B. 24,405.45 km      C. 29,160.075km      D. 246,405.45km      E. 291,600.75km
- Which set has all equivalent fractions?  
A.  $\left\{\frac{1}{4}, \frac{2}{8}, \frac{6}{24}, \frac{7}{28}, \frac{8}{64}\right\}$       B.  $\left\{\frac{1}{2}, \frac{5}{10}, \frac{6}{12}, \frac{7}{13}, \frac{8}{16}\right\}$       C.  $\left\{\frac{1}{3}, \frac{3}{9}, \frac{4}{12}, \frac{7}{21}, \frac{9}{27}\right\}$   
D.  $\left\{\frac{1}{5}, \frac{5}{10}, \frac{7}{35}, \frac{10}{50}, \frac{12}{60}\right\}$       E.  $\left\{\frac{4}{6}, \frac{12}{18}, \frac{16}{25}, \frac{20}{30}, \frac{24}{36}\right\}$

11. The value of  $4\frac{1}{4} - 3\frac{2}{8}$  is  
 A.  $1\frac{1}{4}$       B.  $13\frac{26}{32}$       C. 1      D.  $13\frac{32}{26}$       E.  $1\frac{1}{8}$
12. Shelvin bought 9 t-shirt at \$24.95 each. What is the total amount that he has to pay?  
 A. \$249.50      B. \$224.55      C. \$224.95      D. \$220.95      E. \$249.95
13. If  $(A - 4) \times 8 = B$ , what will be the value of  $B$  when  $A$  is 13?  
 A. 64      B. 104      C. 100      D. 72      E. 108
14. Sam arranged the following numbers from largest to smallest (0.24, 0.78, 0.22, 0.94, 0.51). Which set of numbers show the correct arrangement done by Sam.  
 A. 0.94, 0.78, 0.51, 0.22, 0.24      B. 0.22, 0.24, 0.51, 0.78, 0.94      C. 0.22, 0.24, 0.78, 0.51, 0.94  
 D. 0.78, 0.51, 0.94, 0.24, 0.22      E. 0.94, 0.78, 0.51, 0.24, 0.22
15. Calculate the volume of the cuboid.  
 A.  $63 \text{ cm}^3$       B.  $84 \text{ cm}^3$   
 C.  $756 \text{ cm}^3$       D.  $108 \text{ cm}^3$   
 E.  $510 \text{ cm}^3$
- 
16. Illustrated below is the sequence of the first four triangular numbers. How many dots will make up the 10<sup>th</sup> triangular number?  
  
 A. 45      B. 21      C. 55      D. 28      E. 36
17. Mr. Raj leaves Suva at 9:00am and reaches his brother's place in Lautoka at 1:00pm. If the distance travelled by Mr. Raj was 230km. What was the average speed of his car?  
 A. 46 km/h      B. 57.5 km/h      C. 55 km/h      D. 76.67 km/h      E. 920 km/h
18. The shape shown on the right is a  
 A. Octagon      B. Hexagon      C. Pentagon  
 D. Heptagon      E. Square
- 
19. The perimeter of a rectangle is 20cm. If its area is  $16\text{cm}^2$ , what are its length and width if both are only in whole numbers?  
 A.  $L = 9, W = 1$       B.  $L = 7, W = 3$       C.  $L = 5, W = 5$   
 D.  $L = 8, W = 2$       E.  $L = 6, W = 4$
20. 789,432 rounded to the nearest hundred thousand is  
 A. 789,000      B. 700,000      C. 790,000      D. 780,000      E. 800,000

21. Mike bought a pizza on his way home. He shared the pizza with his brothers. Jack ate  $\frac{3}{8}$  of the pizza, Mark ate  $\frac{2}{16}$  of the pizza and Rex ate  $\frac{1}{5}$  of the pizza. If Mike ate the rest of the pizza, how much did Mike eat?

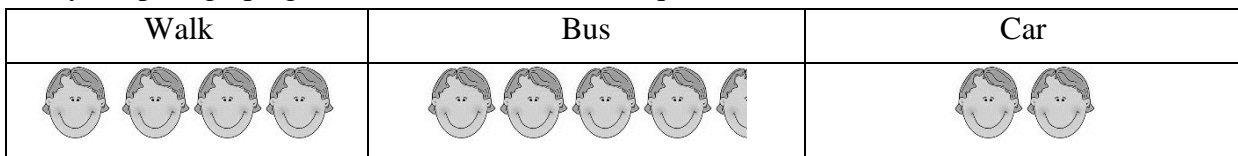
A.  $\frac{5}{16}$                       B.  $\frac{3}{16}$                       C.  $\frac{3}{10}$   
D.  $\frac{7}{10}$                       E.  $\frac{5}{8}$




22. Old Mc Donal has 5 chicken, 3 ducks, 7 goats, 9 cows and 2 pigs on his farm. Calculate the total number of legs of the animals.

A. 88                      B. 104                      C. 52                      D. 26                      E. 68

Study the pictograph given below and answer the question that follows.



KEY:  = 1 dozen student

23. How many children travel by bus?  
A. 60                      B. 50                      C. 54                      D. 4                      E. 48
24. Set A{9,21,23,39,45}. Which number in the list is **not** a composite number?  
A. 9                      B. 21                      C. 23                      D. 39                      E. 45
25. A car when filled  $\frac{6}{10}$  contains 48 litres of petrol. How many litres of petrol would it contain if it was  $\frac{1}{4}$  full?  
A. 32 L                      B. 20L                      C. 49 L                      D. 80 L                      E. 12 L
26. 385ml expressed as percentage of a Litre is  
A. 3.85%                      B. 385%                      C. 61.5%                      D. 38.5%                      E. 6.15%
27. Identify the three dimension solid shown on the right.  
A. Triangular Prism      B. Square Pyramid      C. Triangular Pyramid  
D. Cone                      E. Square Prism
28. How many 350 millilitre jags of water does it take to fill in a 6.3 litre bucket?  
A. 9                      B. 20                      C. 2                      D. 180                      E. 18
29. During the art and craft class Arjun makes a painting in 17 minutes and 40 seconds. How long will it take him to make 6 paintings?  
A. 1 hour 46 minutes                      B. 1 hour 40 seconds                      C. 106 hours  
D. 1 hour 34 minutes                      E. 102 minutes
30. Mere sat for 3 examinations. Her scores were 85, 79 and 91. If she wants to have an average of 87, how much should she score in the fourth examination?  
A. 93                      B. 85                      C. 88                      D. 87                      E. 97

