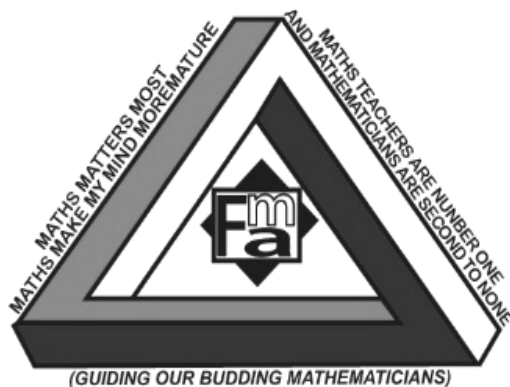


# **FIJI MATHEMATICS ASSOCIATION**



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

**Thursday 6<sup>th</sup> September 2018**

**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 perimeter of a square is 16 cm. What is the area of this square?  
A. 9cm                      B. 16 cm                      C. 24cm                      D. 36cm                      E. 108cm
  - Find the product of 34.06 and 52.36  
A. 1783.3816              B. 18.30                      C. 1783.3216              D. 178338.16              E. 13.11
  - What fraction of 12mm is 3mm?  
A.  $\frac{4}{5}$                       B. 5                      C. 7                      D.  $\frac{1}{4}$                       E.  $\frac{2}{3}$
  - What would be the circumference of a circle if the radius is 7cm? [Use:  $\pi = \frac{22}{7}$ ]  
A.  $22\text{cm}^2$                       B.  $22\text{ cm}^3$                       C.  $44\text{ cm}^2$                       D.  $11\text{cm}^3$                       E. 44cm
  - What is the total perimeter of the following shape that savita drew in her book?  
A.  $17.4\text{ cm}^3$                       B.  $17.4\text{cm}^2$                       C.  $26.6\text{ cm}$   
D.  $26.6\text{cm}^2$                       E.  $26.6\text{ cm}^3$
- The diagram shows a rectangle with a width of 5.1 cm and a height of 3.6 cm. The top corners are rounded with a radius of 2.3 cm.
- Which of the following shows the correct decimal value of  $1\frac{76}{1000}$ ?  
A. 76.00                      B. 1.076                      C. 0.76                      D. 10.0076                      E. 000.76
  - What is the special name given to all seven sided figures?  
A. Square                      B. arrowhead                      C. heptagon  
D. Rhombus                      E. Hexagon
  - Rahul made a profit of 25% when he sold his fishing boat at \$5000. Calculate the original price of the boat.  
A. \$3750                      B. \$4000                      C. \$6250                      D. \$5250                      E. \$1250
  - Aarav leaves Suva and starts his 3 hours 35 minutes journey at 6.45am for Nadi. At what time will he reach Nadi?  
A. 09:45                      B. 10:20                      C. 21:45                      D. 22:20                      E. 10:00
  - Rosey bought a box of 100 lollies. She gave 20% of the lollies to her two friends. From the remainder of the lollies she kept 90% for herself and gave the rest to her younger brother. How many lollies did the brother get?  
A. 10                      B. 20                      C. 72                      D. 8.                      E. 90
  - Ramlu does weekly payment of \$431.25 to the bank for his Toyota hybrid. How much will he end up paying in a year?  
A. \$4485.00                      B. \$862.50                      C. \$44850.00                      D. \$22425.00                      E. \$4657.50

## Year 8

12. Which of the following values is largest?

- A.  $2 + 0 + 1 + 7$       B.  $2 \times 0 + 1 + 7$       C.  $2 + 0 \times 1 + 7$   
 D.  $2 + 0 + 1 \times 7$       E.  $2 \times 0 \times 1 \times 7$

13. Rusi decided to fence his rectangular compound with 6 strands of barbed wire. He plans to have a wooden gate 3m wide. What length of wire will Josh buy?



- A. 71 meters      B. 74 meters  
 C. 327 meters      D. 326 meters  
 E. 426 meters

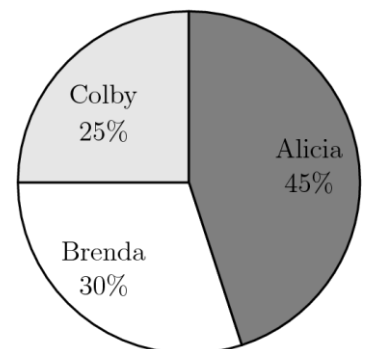
14. Which of the following integers cannot be written as the sum of four consecutive odd integers?

- A. 16      B. 40      C. 72      D. 100      E. 200

15. Rajesh bought 2 large pizza for a party. During the party  $\frac{7}{10}$  of the first pizza and  $\frac{9}{12}$  of the second pizza was eaten. What fraction of the 2 pizzas was eaten?

- A.  $1\frac{9}{20}$       B.  $8\frac{27}{60}$       C.  $\frac{9}{20}$       D.  $1\frac{87}{60}$       E.  $\frac{5}{12}$

16. Alicia, Brenda, and Colby were the candidates in a recent election for student president. The pie chart below shows how the votes were distributed among the three candidates. If Brenda received 36 votes, then how many votes were cast all together?



- A. 70      B. 84      C. 100  
 D. 106      E. 120

17. What is the value of the expression  $\frac{1.2.3.4.5.6.7.8}{1+2+3+4+5+6+7+8}$  ?

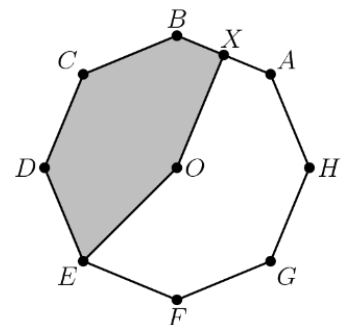
- A. 1020      B. 1120      C. 1220      D. 2240      E. 3360

18. How many square meters of carpet is required to cover a rectangular floor that is 1200cm long and 900cm wide?

- A. 12      B. 36      C. 108      D. 324      E. 972

19. Point  $O$  is the center of the regular octagon  $ABCDEFGH$ , and  $X$  is the midpoint of the side  $\overline{AB}$ . What fraction of the area of the octagon is shaded?

- A.  $\frac{11}{32}$       B.  $\frac{3}{8}$       C.  $\frac{13}{32}$   
 D.  $\frac{7}{16}$       E.  $\frac{15}{32}$



20. 6 men painted a house in 4 days. How many days will 5 men take to paint the same house?

- A. 3.0      B. 4.5      C. 5.2      D. 4.8      E. 5.5

## Year 8

21. Jack and Jill are going swimming at a pool that is one mile from their house. They leave home at the same time. Jill rides her bicycle to the pool at a constant speed of 10 miles per hour. Jack walks to the pool at a constant speed of 4 miles per hour. How many minutes before Jack does Jill arrive?
- A. 5                      B. 6                      C. 8                      D. 9                      E. 10
22. A chess team consists of two boys and three girls. A photographer wants to take a picture of the team to appear in the local newspaper. She decides to have them sit in a row with a boy at each end and the three girls in the middle. How many such arrangements are possible?
- A. 2                      B. 4                      C. 5                      D. 6                      E. 12
23. How many pairs of parallel edges, such as  $\overline{AB}$  and  $\overline{GH}$  or  $\overline{EH}$  and  $\overline{FG}$ , does a cube have?
- A. 6                      B. 12                      C. 18  
D. 24                      E. 36
24. 80 km/hr converted to m/s is ?
- A. 22.22m/s                      B. 44.44m/s                      C. 80.88m/s  
D. 100m/s                      E. 80m/s
25. How many pieces of 1.5m long ribbon can you cut from 60m roll?
- A. 90                      B.120                      C.40                      D. 0.025                      E.80
26. Find the volume of the cylinder with a diameter of 4cm and the height of 7cm [Use:  $\pi = 22/7$ ]
- A. 154cm<sup>3</sup>                      B.44cm<sup>3</sup>                      C.88cm<sup>3</sup>                      D.616cm<sup>3</sup>                      E.14cm<sup>3</sup>
27. The mean of 12 score is 5. A 13<sup>th</sup> score of 18 is added. What is the new mean?
- A. 12.5                      B. 12                      C.6                      D.5                      E.7
28. A girl is 4 years younger than her elder brother. Their combined age is 26 years. What is the brother's age ?
- A. 12                      B. 13                      C. 14                      D. 15                      E.16
29. An aeroplane flew 600km in one and a half hours. The speed of the plane in km/hr is
- A. 750km/hr                      B. 2.5km/hr                      C. 900km/hr  
D. 480km/hr                      E. 400km/hr
30. A container containing 5.4L of water starts to leaks. 2.5L of water leaks before the leak is discovered. The remaining water is transferred to another bucket and the half a liter of water is added. How much water is in the bucket?
- A. 13.5L                      B.8.6L                      C.5.4L                      D.6.4                      E.3.4L

