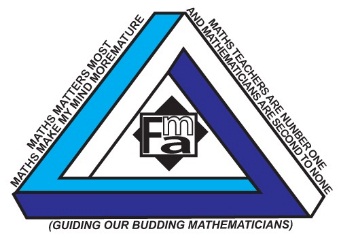
FIJI MATHEMATICS

ASSOCIATION

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**Fiji mathematics competition**

**(fmc)**

**YEAR 11**

**Thursday 23rd July 2015**

Time Allowed: 1 Hour 15 minutes

**Note:**

**Calculators are NOT permitted.**

**Diagrams are NOT drawn to scale.**

**Instructions:**

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



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1. If *x* + 6 = 9, then what is the value of 3*x* + 1

A. 3 B. 9 C. 10 D. 34 E. 46

2. Which of the following is closest to 8?

A. 8.2 B. 7.17 C. 7.7 D. 8.21 E. 7.71

3. The temperature at Snowy Mountains in Canberra was -5 **C. The temperature rose by 8**C and dropped by 10 **C . What is the new temperature?

A. -3 **C B. 13 ** C -23 **C D. -7 **C E. 10 **C

4. In the simplest form, -4*x* +2(4*x* + 5) - 10 *x* is equal to

A. -2*x* + 22 B. -12*x* + 10 C. -6*x* + 10 D. -12*x* – 10 E. -4*x* + 4

5. 32*x* 32(*x*1) when simplified is equal to

A. 32*x*2 B. 32*x*2 C. 3*x*22*x* D. 9 E. 

6. 40 is increased to 50. What is the percentage increase?

A. 20% B. 25% C. 80% D. 10% E. 50%

7. Tickets at a soccer game costs $2 for children and $4 for adults. If a total of 600 tickets were sold for

$2000, how many children tickets were sold?

1. 400 B.200 C.600 D.100 E.300

8. Sofia scored 40% in a Mathematics Test. She was told that her actual mark was 20. What is the test out of?

A. 60 B. 80 C. 40 D. 50 E. 25

9. If  then

A.  B.  C.  D.  E. 

10. Round (202)2 to the nearest hundred.

A. 40,000 B. 48,000 C. 40,800

D. 47,000 E. 49,000

11. What is the length of the side marked *x?*

A. 225



*x*

B. 15

9cm C. 13

D. 25

12 cm E. 16

12. Bill is ten years older than his sister. If Bill was twenty-five years of age in 1983, in what year could his sister have been born?

A. 1948 B. 1953 C. 1958 D. 1963 E. 1968

13. Determine the slope of line AB

***y***

***B(-3,2)***

***A (4,1)***

***0***

***x***

A.  B.  C. -7

D. 7 E. 

14. Given log 4(*5x+6*) = 4. What is the value of *x*.

A. 4 B. 5 C. 50 D. 10 E. 25

15. In a student council election, Savita received 60% of the votes and Kesho received all the rest. Savita received 55 more votes than Kesho. How many students voted?

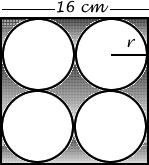
A. 275 B. 255 C. 115 D. 60 E. 55

16. The Computer Store has reduced the price of a computer by 15%. What is the original price of the computer if the sale price is $1275?

A. $1200 B. $800 C. $1500 D. $1450 E. $1300

17. Successive discounts of 10% and 20% are equivalent to a single discount of:

A. 30% B. 28% C. 20% D. 15% E. 10%

18. If all circles are tangent to each other and the square, find the shaded area.

A. 256 - 16π B. 256 - 8 π

C. 32 - 64π D. 256 + 16π

E. 256 - 64π

19. is equal to

1. 6 B. -10 C. -6 D. 10 E. -18

20. (0.2)x 0.8 equals

1. 0.008 B. 0.16 C. 0.0064 D. 0.064 E. 0.64

21. Five out of six whole numbers is are 22, 18, 13, 22 and 20. If the mean is 18, then the sixth number is

1. 7 B. 13 C. 18 D. 22 E. 20

22.  has a factor (x – 4). What is the value of m?

1. 8 B. 7 C. 6 D. -6 E. -7

23. Simplify

A. B. C. D. E.

24. The equation of a line which is perpendicular to the line and passes through (0,1) is

A. B. C.

D. E.

25. The value of in the polygon given on the left is

A. 600 B. 3600 C. 1200 D.2400 E. 1500

26. What is the equation of the line passing through the points and ?

A. B. C. D. E.

27. If matrix M = then equals

A. 11 B. -2 C. -6 D. 2 E. -10

28. The volume of a cube is 27cm. What is its total surface area?

A. 3cm B. 9cm C. 27cm D. 54cm E. 81cm

29. What is the approximate value of the square root of 1596?

1. 20 B. 30 C. 40 D. 50 E. 60

30. When a metallic ball bearing is placed inside a cylindrical container, of radius 2 cm, the height of the water, inside the container, increases by 0.6 cm. The radius, to the nearest tenth of a centimetre, of the ball bearing is

A. 1 cm B. 1.2 cm C. 2 cm D. 0.6 cm E. 0.2cm