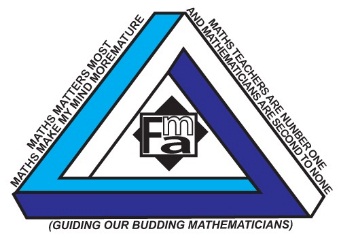
FIJI MATHEMATICS

ASSOCIATION

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**Fiji mathematics competition**

**(fmc)**

**YEAR 10**

**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. 6 × 111 – 3 × 111 are equal to:
2. 222 B) 333 C) 444 D) 555 E) 666
3. If the fractions are arranged from lowest to highest then the middle fraction is:

; 31% ; ; 0.313; 0.303

A)  B) 0.313 C)  D) 31% E) 0.303

1. “Zappy Stores” gives customers four points for every R75 spent. Thandeka earned 36 points. How much did Thandeka spend at Zappy Stores?
2. R375 B) R450 C) R525 D) R600 E) R675
3. Mr Juju drove 80 kilometers in 45 minutes. What is his average speed in kilometers per hour?

A) 1.8 B) 60 C) 106.7 D) 177.8 E) 3600

1.  when simplified is:

A) x – 9 B) x + 3 C) x – 3 D)  E) 

1. 6390 in standard form is
2. 0.0369 x 10 B) 0.369 x 10-2 C) 3.69 x 10-3

D) 3.69 x 103 E) 36.9 x 10-3

1. A three-digit number is divisible by 8, 12 and 30. The smallest possible number is:
2. 108 B) 120 C) 240 D) 360 E) 480
3. The hundreds digit of the product 7777 × 9999 is:
4. 2 B) 3 C) 4 D) 5 E) 6
5. The number of whole numbers that lie between 4² and 4³ is:
6. 45 B) 46 C) 47 D) 48 E) 49
7. 6*x* - 3 – (3 – 5*x*) equals
8. 6 - *x* B) *x* C) *x* - 6 D) 11*x* - 6 E) 6*x*

1200

1100

P

R

Q

1. In the diagram, the size of ∠ PQR is

A) 40°  B) 50°   
C) 60°  D) 70°   
E) 80°

1. The number of times the hour hand and the minute hand of a clock from a right angle with each other between 06:00 and 12:00 on the same day, is:

A) 12  B) 11   C) 10  D) 6   E) 5

1. There are 15 balls in a box: 8 balls are green, 4 are blue and 3 are white. Then 1 blue and 1 white ball are taken from the box and put away. What is the probability that a green ball is selected at random from the box?   
   A)  B)   C)  D)   E) 
2. John can dig the garden in 30 minutes, while Jack takes 20 minutes. If they work together they will work:  
   A) 10 min  B) 12 min   C) 15 min D) 25 min E) 50 min
3. Dan caught 40 fish in five days. Every day he caught 3 fish more than the previous day. The number of fish he caught on the third day is:
4. 8 B) 9 C) 10 D) 11 E) 14
5. When graphed in the (x,y) coordinate plane, at what point do the lines 2x + 3y = 5 and x = -2 intersect?   
   A) (-2,0)  B) (-2,5)  C) (2,-3)  D) (-2,-5)  E) (-2,3)
6. F*(x) = x2 – 6x*. Find F(*-2*)

A) -16 B) -10 C) 8 D) 10 E) 16

1. Five positive integers have a mean of 10, a median of 10 and only one mode, which is 12. What is the difference between the largest and the smallest of these numbers?
2. 3 B) 5 C) 6 D) 7 E) 8
3. Solve for *x* in 
4. - 4 B) -3 C) 0 D) 3 E) 4
5. 120% of Ellie’s weight equals 75% of James’ weight. The ratio of Ellie’s weight to James’ weight is:

A)  B)  C)   D)  E) 

1. A book that normally sells for $35 is on sale at 25% off. The best estimate sale price is:  
   A) $9  B) $32   C) $26  D) $43  E) $31
2. Sipho memorized 5 out of 7 songs for a music competition. What percent of the songs did he memorize?

A) 40% B) 55% C) 65% D) 71% E) 85%

1. South America and Africa are drifting apart at 30 cm per century. The millimetres per week that it is drifting apart are:
   1. 60 B) 30 C) 6 D) 0.6 E) 0.06
2. John says a number out loud; Jane doubles it but Rebecca multiplies it by 5 and then subtracts 6. Both girls get the same result. The number John mentioned was:
3. 5 B) 4 C) 3 D) 2 E) 1
4. The measures of angles A, B and C of a triangle are in the ratio 4:5:3. What is the size for the largest angle?   
   A) 15°  B) 30°  C) 45°  D) 60°  E) 75°
5. Three different positive integers have a mean of 7. What is the largest positive integer that could be one of them?
6. 15 B) 16 C) 17 D) 18 E) 19
7. The total weight of a box, 20 plates and 30 cups is 4.8 kg. The total weight of the box, 40 plates and 50 cups is 8.4 kg. What is the total weight of the box, 10 plates and 20 cups?
8. 3 kg B) 3.2 kg C) 3.6 kg D) 4 kg E) 4.2 kg
9. Out of the 80 students in class, 25 are playing soccer, 15 playing rugby and 13 playing netball. 3 are playing soccer and rugby; 4 are playing rugby and netball; 2 are playing soccer and netball; and none are playing all 3 sports at the same time. How many students are not playing any of the three sports?

A) 7  B) 18  C) 53  D) 62  E) 36

1. A number is added to one third of itself. The result is 36. What is the number?  
   A) 9 B) 18 C) 15 D) 24 E) 27
2. The football shown is made by sewing together 12 black pentagonal panels and 20 white hexagonal panels. There is a join wherever two panels meet along an edge. How many joins are there?

A) 20 B) 32 C) 60

D) 90 E) 180