**FMA Team Mathematics Competition - Final**

**YEAR 9 – 2018**

Y9/1 Evaluate (2.01 + 3.4 + 5.225) ÷ 0.3

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Y9/2 Jessica goes on a diet. She starts with a weight of 61 kg and loses 2 kg every 3 weeks for 12 weeks. She abandons her diet while on two-week holiday and gains back 1 kg per week. How much does she weigh after her holiday?

Y9/3 Find

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Y9/4 Petero and Miriama both held stalls at Bula Festival in order to raise funds for their overseas trip. Miriama’s stall raised a total of $432.90.If Peter had another $17.05, he would have made half as much as Miriama. How much did Peter’s stall make?

Y9/5 Simplfy (-3 b)3 ÷ 2 a3 b × ( ̶ 2ab2)2

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Y9/6 Solve for x =

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Y9/7 Shalvin bought a piece of land with area 5104 m2. He kept of land for himself, used of the remaining land in developing drains and roads. After developing he equally divided the remaining land into 8 plots and sold it. What was the size of each plot?

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Y9/8 Magaret is 32 years younger than her aunt. Magaret worked out that if she added 13 to her age, then tripled it,she would be 1 less than double her aunt’s age. Find her aunts’s age.

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Y9/9 A rectangular based swimming pool has the dimensions of length as 10 m, width as 4 m and height as 1.2 m. A garden hose is used to fill the pool at the rate of 24 L per minute. How long will it take to fill the pool? (Give your answer in hours and minutes)

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Y9/10

In one full revolution, the 7-cm long minute hand of a clock would sweep out a circle. What is the area that it covers in one complete revolution? (π = ).

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Y9/11 Simplify - +

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Y9/12 8 men on a desert island are able to survive for 12 days with 6 litres of water. How long could 4 men survive on 5 litres of water?

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Y9/13 A flagpole is held upright by four wires. Each wire is fastened to the pole 8 meters above the ground, and to pegs in the ground, 6 meters from the base of the pole. What is the total length of the four wires?

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Y9/14 A room contains 96 people. A man leaves and is replaced by a woman, leaving three times as many women as men in the room. How many men and how many women were there originally?

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Y9/15 Solve + 3(h – 4) = 20

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Y9/16 A man has a square garden with an area of 100 m2. He increases all sides of this garden by a certain amount which results in an area of 150 m2. How much did he increase each side by?

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Y9/17 A truck driver was booked by LTA officers because the load on the truck was 40% over weight. If the truck was carrying 1600 kg over the limit, what was the total weight of his load?

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Y9/18 A kite is flown on a cord 120 m long. The cord, held taut with its end at a height of 1.5 m above the ground makes an angle of with the horizontal. How high above the ground is the kite?

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Y9/19 A spherical shaped balloon contains 4 litres of air. The balloon has more air added so that its radius is doubled. What is the ratio of the original surface area to the new surface area?

Y9/20

A tour party of 28 people arrived at a popular tourist resort for vacation. The activities offered on a particular day were bungy jumping, and water rafting,10 people went bungy jumping, 14 went rafting, and 5 did both.

How many tourists didn’t bungy jump?

**FIJI MATHEMATICS ASSOCIATION**

**TMC - ZONE**

**RESULT SHEET YEAR 9: 2018**

Name of School: …………………………………………….

Name of Marker: …………………………………………….

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| --- | --- | --- | --- | --- |
|  | **Answers** | **+100** | **-100** | **Cumulative Score** |
| 1 | 35.45 |  |  |  |
| 2 | 55 kg |  |  |  |
| 3 | 14 |  |  |  |
| 4 | $199.40 |  |  |  |
| 5 | -54 a5b6 |  |  |  |
| 6 | 3 |  |  |  |
| 7 | 398.75 m2 |  |  |  |
| 8 | 56 years |  |  |  |
| 9 | 33 hrs and 20 mins |  |  |  |
| 10 | 154 cm2 |  |  |  |
| 11 |  |  |  |  |
| 12 | 20 days |  |  |  |
| 13 | 400 m |  |  |  |
| 14 | 25 men and 71 women |  |  |  |
| 15 |  |  |  |  |
| 16 | 2.25 m |  |  |  |
| 17 | 5600 kg |  |  |  |
| 18 | 61.5 m |  |  |  |
| 19 | 1 : 4 |  |  |  |
| 20 | 18 |  |  |  |
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