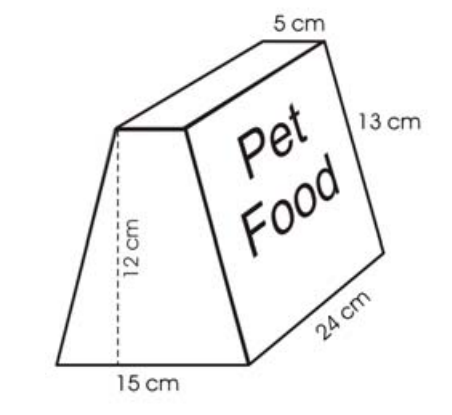
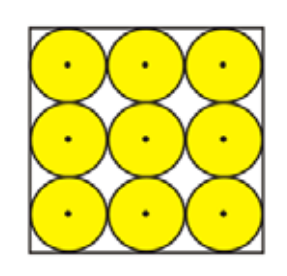
**FMA Team Mathematics Competition - Zone**

**YEAR 9 – 2016**



Y9/1 Pet food at a nearby Pet Shop comes in the following packaging. If my pet kitten eats around 60 cm3 of food daily, how long will this product last? Assume that the box is full of pet food when bought.



Y9/2 If 9 candles are being packaged in one square box of length 42 cm, what percentage (to the nearest whole number) of the box’s capacity is unused? Use .

Y9/3 What is the lowest common multiple of 20 and 24?

Y9/4 A scalene triangle has sides in the ratio of 1: 2: 3. If the perimeter of the triangle is 24 cm, what is the length of its shortest side?

Y9/5 The area of three adjacent sides of a cuboid is 12 cm2, 8 cm2 and 6 cm2. What is the volume of this cuboid?

Y9/6 An orange drink is 5% pure oranges, by volume. If 3 litres of water are added to 2 litres of this drink, what percent of orange will be in the new drink?

Y9/7 A clock at 12.00 p.m. starts to lose 15 minutes every hour. What time will the clock display when the actual time is 9.00p.m?

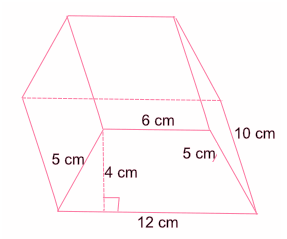
Y9/8 Two airplanes left the same airport at the same time, flying in opposite directions. One flew at 400 km/h and the other flew at 250 km/h. In how many hours will the distance between the two planes be 1625 km?

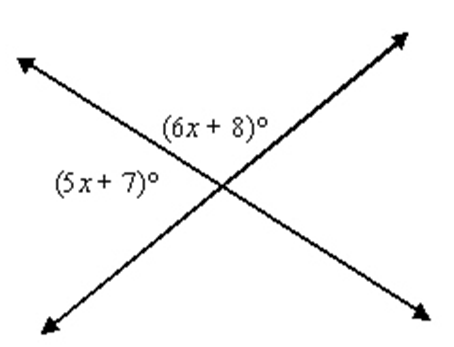
Y9/9 Semi was shooting targets and his father rewarded him 15 cents for the first hit and kept doubling the reward for each hit. If tom had 8 hits , how much will he get in total?

Y9/10 Solve for x ;



Y9/11 Gold Bach's conjecture states that: “**Every even number greater than 2 can be written as the sum of two primes**.” Which pairs of primes supports this conjecture for 40?

Y9/12 Determine the total surface area for the following Prism.



Y9/13 Solve for x;

Y9/14 A Dining Table is priced $550. The shopkeeper offers a 15% discount on this price and then charges a 12% fee on the sale price for the delivery. What is the total price paid?

Y9/15 A large container is half full of juice. Another 2 liters of juice is put into the container making the container two thirds full. How many liters of juice can the container hold?

Y9/16 If set A is the set of all square numbers and set B is the set of all odd numbers, determine the 30th term of the set provided the elements in this set is arranged in ascending order.

Y9/17 Given that are two positive integers, determine



Y9/18 If , determine the value of 

Y9/19 A rectangular wall of length 9.8 paces and width of 4 paces need to be painted. It is found that a tin of paint covers 4.5 m2 of a standard concrete wall. Given that 1 pace is approximately equal to 75cm, determine the number of tins that needs to be bought to complete the painting.

Y9/20 Evaluate the value of the following when .



TIE BREAKER

Y9/21 Ravi was supposed to multiply a number by 10. But by mistake he divided by 10 and got the answer as 24. What would have been the result if he had multiplied the original number by 100?

Y9/22 I spent 30% of my money on bus fares, 20% on my lunch and 15% on a ticket to a show. I have $14.00 left. How much money did I have at the beginning?