**FMA TMC - Finals**

**YEAR 9 – 2014**

Y 9/1 Jordon wants to buy the following items: 3 Erasers, 4 Pens, 2 Notebooks, and a Ruler. Each Eraser costs $0.29, each Pen costs $0.72, each Notebook costs $1.08 and each ruler costs $0.25. What change he should get if he pays Ten dollars?

Y 9/2 A water tank is full and holds 50,000 liters. 80 liters of water is removed from the tank each hour. How many liters of water will be left in the tank after two days?

Y 9/3 Mrs. Casey, the science teacher, collected 8 sedimentary rocks and 16 metamorphic ones. Now she wants to create some identical kits for studying rocks, without having any rocks left over. What is the greatest number of kits she can create?

Y 9/4 Over the weekend, Amanda drank 4/5 of a bottle of soda and Eve drank 1/3 of a bottle. How much more soda did Amanda drink than Eve?

Y 9/5 Two fractions are equally spaced between and. What the smaller of the two fractions?

Y 9/6 A litre of orange fruit drink contains 22% orange juice. How many millilitres of orange juice must be added to produce a mixture containing 50% orange juice?

Y 9/7 1152 digits are used to number the pages of a book consecutively from page 1. How many pages are there in the book?

Y 9/8 Amongst the children in a family each boy has many sisters as brothers, but each girl has only half as many sisters as brothers. How many children are there in the family?

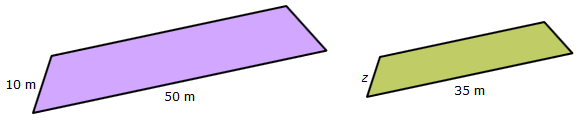
Y 9/9 How many days is it from Friday the 1st August to the first Monday in September?

Y 9/10 Some friends cut up 20 watermelons. They cut 13 into halves and the rest into quarters. How many pieces of watermelon were there?

Y 9/11 The ratio of jacks to marbles in the bowl was 2 to 5. If the bowl contained 350 jacks and marbles, how many were marbles?

Y 9/12 Sally receives the following scores on her math tests: 78, 92, 83, 99. What score does she need on the next test in order to have an average of 90 on her math tests?

Y 9/13 If these two shapes are similar, what is the measure of the missing length z?



Y 9/14 A plane leaves the Princeton airport, travelling due north at a rate of 920 kilometres per hour. At the same time, another plane departs from the same airport and travels due south at a rate of 1,100 kilometres per hour. In how long in **nearest minutes** will the planes be 1,900 kilometres apart?

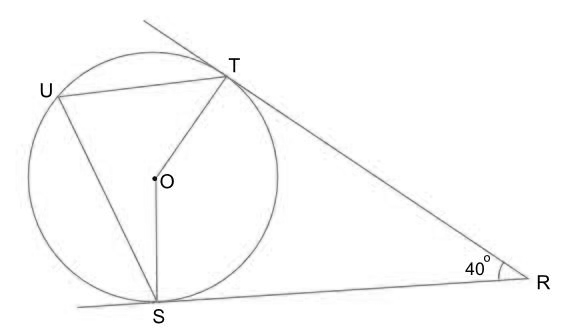
Y 9/15 There are 4 consecutive integers that add up to 198. What is the value of the greatest integer?

Y 9/16 In one week, Carly's family drank cartons of regular milk and cartons of soy milk. How much milk did they drink in all?

Y 9/17 Eli is making a special blend of coffee. He mixes ground Columbian beans worth $9.50 per kilogram with ground Kona beans, worth $19.00 per kilogram. Overall, the blend costs $15.20 per kilogram. If Eli has 1 kilogram of Columbian beans already on hand, how many kilograms of the Kona beans should he buy to make his special blend?

Y 9/18 An exterior angle of the regular polygon is. What is the name of the polygon?

Y 9/19 RS and RT are tangents to the circle center O. . What is the size of



Y 9/20 A swing set was marked up 150% from an original purchase cost of $80. Last Wednesday, Jennifer sold the swing set, earning a 9% commission on the sale price. How much commission did she make from the sale?

Tie Breaker

Y 9/21 In the diagram, four equal circles fit perfectly inside a square; their centres are the vertices of the smaller square. The area of the smaller square is 4cm2. What is the area of the larger square?

Y 9/22 Solve for: