

Fiji Mathematics Team Competition – Zone

YEAR 8 – 2015

- Y8/1 Sam gave Jen $\frac{1}{2}$ of his jellybeans. Jen ate $\frac{1}{2}$ of the jellybeans and gave the rest to Kyle. Kyle kept 8 of the jellybeans and gave the last 10 to Kim. How many jellybeans did Sam have at the beginning?

- F2/2 This year Jiu earned $2\frac{1}{2}$ times more than last year. If her earning is \$9218.50 this year, how much did she earn last year?

- Y8/3 Calculate the total surface area of the square prism with a base length of 6.75cm and a height of 4cm? (Answer correct to two decimal place)

- Y8/4 It was a very freaky weather day. The temperature started out at 9°C at 6 am in the morning and went to -13°C at noon. It stayed at that temperature for six hours and then rose 7°C . What was the temperature at 6 p.m.?

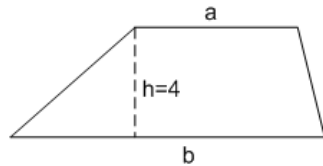
- Y8/5 A submarine dove 836 m. It rose at a rate of 22 m per minute. What was the depth of the submarine after 12 minutes?

- Y8/6 Evaluate the expression when $a = -2$; $b = -3$ and $c = -1$

$$\frac{b+c}{a} + (b+1)2 =$$

- Y8/7 The sum of three consecutive integers is 63. What is the largest of the three integers?

Y8/8



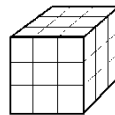
The trapezoid in the figure above has an area of 34 cm^2 and an altitude h of 4 cm . What is the sum of its parallel sides?

Y8/9 Sara left Lautoka traveling 46 km/hr . Mary, to catch up, left some time later driving at 55 km/hr . Mary caught up after 6 hours. How long was Sara driving before Mary caught up?

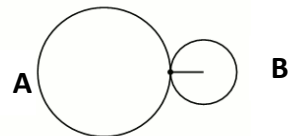
Y8/10 How many prime numbers are there between the numbers 1 to 50?

Y8/11 Solve the equation: $11 - 10 \times 17 + 7 \times 10 =$

Y8/12 The cube below is painted and then cut into 27 smaller equal- sized cubes. How many cubes have exactly two faces painted?



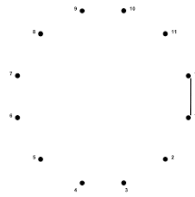
Y8/13 In the diagram A and B are two wheels. Wheel B rolls around the outside of Wheel A. Wheel A has a radius of 6 cm and wheel B has a radius of 1.5 cm . How many times will wheel B turn if it rolls completely around the outside of Wheel A.



Y8/14 In a pie eating contest a man ate a total of 100 pies in 5 hours. Each hour he ate 6 less than he did during the previous hour. How many pies did he eat in the third hour?

Y8/15 What whole number between 10 and 100 is twice the product of its digits?

Y8/16 How many line segments are needed to join each point to every other point



Y8/17 A length of rope is cut in half and one half is used. Then one third of the other half is cut off and used. If the remaining piece of rope is 10m long, how long was the original rope?

Y8/18 A floor tiler charged \$250.00 to tile a rectangular room. His next job is to tile the floor of a room twice as long and twice as wide. How much should be charged for the larger room?

Y8/19 On scales, one brick balances with two kilograms and a half a brick. How much does one brick weigh?

Y8/20 If the height of a triangle is **decreased** by 40% and its base is **increased** by 40%, what would be the effect on its area? (Required to calculate by what % the area would increase or decrease)

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Tie breaker

Y8/21 The height of a river is shown on a marker, with the level at which it floods marked as zero. Due to heavy rain, the river level changed from -3.8 to 2.7 on the marker. By how many meters had the river level changed?

Y8/22 Simplify

$$\frac{4}{1 + \frac{1}{1+2}}$$
