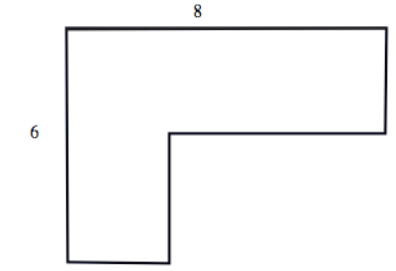
**Fiji Mathematics Team Competition– Finals**

**YEAR 6- 2017**

Y6/1 Twelve people, and no more, can sit evenly spaced around a large square table. Rohan arranges eight of these square tables in a row to make one long rectangular table. What is the maximum number of people that can sit evenly spaced around this long table?

Y6/2 A ball and a bat cost $90 in total. Three balls and two bats cost $210 in total. How much does a bat cost?

Y6/3 What is the perimeter of the shown polygon?



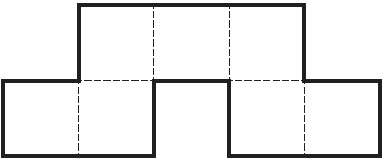
Y6/4 What digit replaces \* to make a correct statement?



Y6/5 Danica wants to arrange her model cars in rows with exactly 6 cars in each row. She now has 23 model cars. What is the smallest number of additional cars she must buy in order to be able to arrange her cars in this way?

Y6/6 Sasha added all but one of the first ten positive integers together. Her sum is a square number. Which integer did Sasha not include?

Y6/7 If the total area enclosed by the seven congruent squares shown is 112, what is the perimeter of the outer polygon?



Y6/8 For every $50 worth of supplies Bill buys at a local hardware store, he receives a $5 discount. If Bill bought $846 worth of supplies from this store, what was the cost after the discounts were applied?

Y6/9 When half of the students in Mr. Freeman’s class joined the National Math Club, there were 13 students who did not join. What is the total number of students in Mr. Freeman’s class?

Y6/10 The ratio of dogs to cats in a pet store is 7:5. If there are 6 more dogs than cats, how many cats are in the pet store?

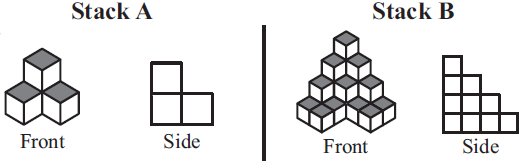
Y6/11 On the side of a taxi, fares are listed as $2.25 for the first km and 75¢ for each additional  km. What is the fare for a 3-km ride in this taxi?

Y6/12 What is the value of 

Y6/13 The table shows the five methods of transportation that the 360 students who attend Fiji Middle School use to get to school. If every student chooses exactly one of these as his or her primary method of transportation to school, what percent of the students walk to school?

|  |  |
| --- | --- |
| Method of Transport | #Students |
| Car | 84 |
| Bus | 178 |
| Walk | 90 |
| Bike | 8 |

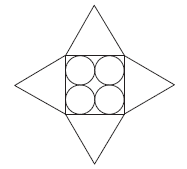
Y6/14 In the figure shown, the cubes in stack A have edge length 2 inches, and the cubes in stack B have edge length 1 inch. What is the absolute difference between the volumes of the two stacks, in cubic inches?



Y6/15 What is the area, in square units, of the rectangle with vertices  and 

Y6/16 Mia is helping her mom pick up 30 toys that are strewn on the floor. Mia’s mom manages to put 3 toys into the toy box every 30 seconds, but each time immediately after those 30 seconds have elapsed, Mia takes 2 toys out of the box. How much time in minutes will it take Mia and her mom to put all 30toys into the box for the first time?

Y6/17 Four circles of radius 2.5 cm touch the sides of a square and each other, as shown in the diagram. On each side of the square, an equilateral triangle is drawn to form a four-pointed star. What is the perimeter of the star?



Y6/18 Bob buys Blitzs for his friends. The store sells single Blitzs for $1 each, 3- Blitzs boxes for $2 each, and 5- Blitzs boxes for $3. What is the greatest number of Blitzs that Bob can buy with $8.

Y6/19 When Peter went to the shop, he found he could spend all his money on 6 cans of cola and 7 buns or on 8 cans of cola and 4 buns. If he decided to buy only buns, how many buns could he buy?

Y6/20 Miss Spelling has enough sheets of paper to give each pupil in her class 3 sheets and have 31 sheets left over. Alternatively, she could give each pupil 4 sheets and have 8 sheets left over. How many sheets of paper does she have?

Tie Breaker:

Y6/21 How many different cubes are there with three faces coloured red and three faces coloured blue?

Y6/22 The lengths of three adjacent sides of a quadrilateral are equal. The angle between the first and second of these sides is  and the angle between the second and third of these sides is. What is the largest angle of the quadrilateral?

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