



האולימפיאדה הארצית במתמטיקה לכיתות ד'-ה'
שלב ב, שנת תשפ"ד

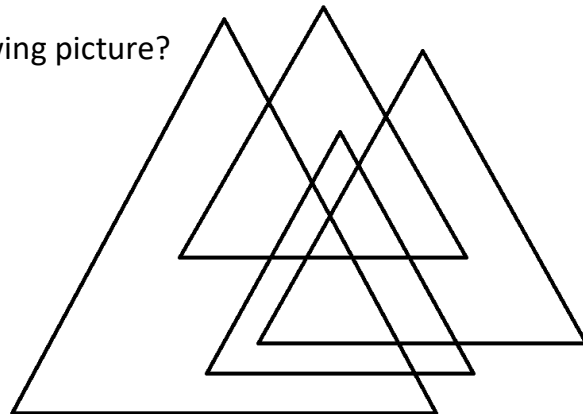
1. Yossi has four cards with digits written on them: one digit on each side. The smallest number that Yossi can assemble using all the cards is 1147. Another two numbers that Yossi can assemble are 3184, 2517. What is the largest number that Yossi can assemble using the four cards?

2. Consider the following expression:

$$120 - 8 \times 9 + 18 : 3$$

You are allowed to add brackets between the numbers (as many as needed).
What is the largest possible value of the expression?

3. How many triangles are there in the following picture?



4. The result of the multiplication of two natural numbers is 704, and the sum of those two numbers is 75. Find the difference of the two numbers.

5. There are 50 apples in the basket: red, yellow, and green. If we take out 31 apples, there will certainly be a yellow apple or a green apple among them. If we take out 36 apples, there will surely be a green or red apple among them. What is the smallest number of green apples that must be in the basket?

6. Pictured is a map of an apartment with two rooms: one small and one large.

To paint the ceiling in the small room, you need 10 liters of paint,

To paint the walls in the small room, you need 40 liters of paint,

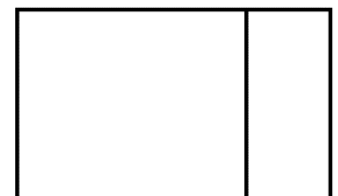
To paint the ceiling in a large room, you need 30 liters of paint,

To paint the walls in the great room, you need 60 liters of paint.

If we would remove the wall between the two rooms, how many liters

of paint will we need to paint the remaining walls and the ceiling inside the apartment?

Note: We paint the walls and ceiling with a layer of paint of uniform thickness. The height of the walls is uniform everywhere in the building. When calculating the amounts of paint, the doors and windows are ignored.



בהצלחה!