



# RAMC 2024

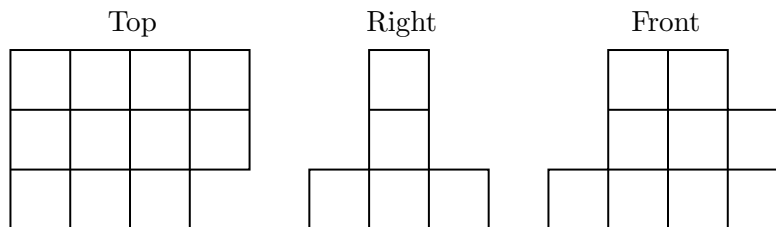
## Elementary I Invitational Round

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- **SCORING:** The questions in this round are all worth 1 point each, for a total of 10 points.
- This round contains 10 questions to be solved in 30 minutes. All answers are integers.
- No computational aids are permitted other than scratch paper, graph paper, and a pen/pencil. No calculators of any kind are allowed.
- Fill out your information, and sign/initial the honor code on the answer sheet provided.
- If you believe there is an error on the test, submit a challenge to the proctors. Please include your name, level (E1/E2/MS/HS), and your solution to the problem with explanation.

Do not flip the page until the proctor begins the round!

1. Abby, Bob, and Charlotte have a total of 45 gumballs. Bob has 20 more gumballs than Abby, and Abby has 10 fewer gumballs than Charlotte. How many gumballs does Charlotte have?
2. What area does a triangle with a base of 5 and a height of 12 have?
3. Joe buys 1 pair of shorts and 2 shirts for \$34 before any discounts are applied. After applying the discount: "Buy one shirt get another 50% off", his total comes to \$28. How many dollars did Joe spend on the pair of shorts?
4. I want to cover my 10-by-10 foot bathroom floor with 4-by-4 inch tiles. In order to cover it completely, how many tiles do I need?
5. Zoey has 63 cents in quarters, dimes, nickels, and/or pennies. What is the smallest possible number of coins that Zoey can have?
6. Erin organizes blocks on a table. Below are the views from the top, right, and front sides.



If there are no gaps that are not visible, how many blocks are there in total?

7. Kylee's farm has only chickens (which have 2 feet) and horses (which have 4 feet). In total, her 16 animals have 52 feet. What is the positive difference between the number of horses and chickens on her farm?
8. The ice cream cones at Julia's IceCream Shop always come with 2 scoops of different flavors and 2 different toppings. The store's menu is listed below:

JULIA'S ICECREAM MENU

Flavors	Toppings
Chocolate	Chocolate Chip
Vanilla	Caramel Drizzle
Mint	Sprinkles
Strawberry	

How many different cones does Julia's Ice Cream shop offer?

9. I have 10 marbles. My friend gives me 8 more, and then I give half of the marbles I have to my brother. What is 3 times the number of marbles I have now?
10. A 11 inch by 7 inch rectangle had three rectangular chunks cut out to form the gray rectilinear shape below. Find the area of this shape, in square inches.

