

MATHCOUNTS®

2026 CHAPTER COMPETITION Target Round Problems 1–8

Name _____

DO NOT BEGIN UNTIL YOU ARE INSTRUCTED TO DO SO.

This section of the competition consists of eight problems, which will be presented in pairs. Work on one pair of problems will be completed and answers will be collected before the next pair is distributed. The time limit for each pair of problems is six minutes. The first pair of problems is on the other side of this sheet. When told to do so, turn the page over and begin working. This round assumes the use of calculators, and calculations also may be done on scratch paper, but no other aids are allowed. All answers must be complete, legible and simplified to lowest terms. Record only final answers in the blanks in the left-hand column of the problem sheets. If you complete the problems before time is called, use the time remaining to check your answers.

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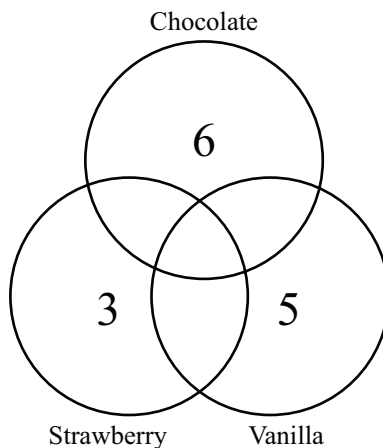
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1. \$ _____

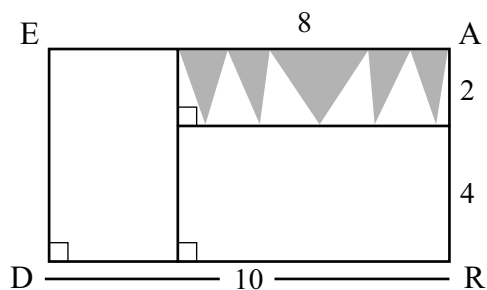
Eli buys a copy of the new board game Exploiting Mittens. Later, the game goes on sale for 20% off, so he buys another copy of it and gifts it to his friend Ramya. If the total amount of money he spends on the two copies of the game was \$27, how much does one copy of the game cost (without the 20% discount)?

2. _____ children

At a local preschool, 24 children were surveyed about their preferences of three ice cream flavors: chocolate, strawberry and vanilla. The survey found that 6 children enjoy only chocolate, 3 enjoy only strawberry and 5 enjoy only vanilla. Meanwhile, 5 enjoy both chocolate and strawberry ice cream; 7 enjoy both chocolate and vanilla ice cream; 4 enjoy both strawberry and vanilla ice cream; and children who enjoy all three flavors are included in these counts. If each child enjoys at least one of the three flavors, how many of the children surveyed enjoy all three flavors?



3. _____ What fraction of the rectangle DEAR, shown below, is shaded? Express your answer as a common fraction.



4. _____ ways Elle is painting the four walls of her room. She has red, green and blue paint, each in sufficient quantity to cover two walls. If each wall must be painted a single color and the walls are distinguishable, how many different ways can Elle paint the room?

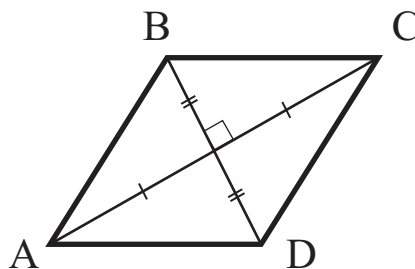
5. _____ ways

Marta rolls three fair 8-sided dice, with numbers 1 through 8 on their faces. If she rolls one die at a time, how many ways are there for Marta to roll a sum of 20? One such example to include is shown.

$$\frac{8}{\text{1st roll}} + \frac{4}{\text{2nd roll}} + \frac{8}{\text{3rd roll}} = \frac{20}{\text{sum}}$$

6. _____ in²

Rhombus ABCD has perimeter 4 inches. If the length AC is twice the length BD, what is the area of rhombus ABCD? Express your answer as a common fraction.



7. $\frac{\text{meters}}{\text{per second}}$ Michael is driving from Las Vegas to Reno for a weekend of fun! The trip is 740 kilometers each way, and Michael takes 8.5 hours to get there. When coming back, he hits heavy traffic and takes 10 hours to get back to Las Vegas. What is Michael's average speed, in meters per second, during this trip? Express your answer as a decimal to the nearest tenth.

8. ways The MATHCOUNTS Question Writing Committee is meeting to finalize the problems for competition year 2026. They are seated around a circular table where the seat of the committee chair, Greg, has already been determined in advance. The remaining six members must sit such that exactly one of the following pairs of writers must be seated next to each other: Thinula and Matthew, Ryoko and Michelle, or Rachel and Liam. In how many ways can the members be seated around the table?

