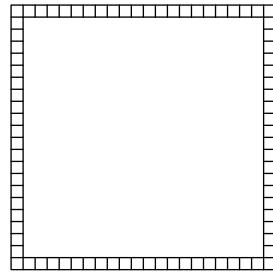


Round 1

1. [4] While baking croissants, Harini realizes that there is a unique positive integer whose divisors sum to 68. What is this integer?
2. [4] Evan distributes 80 indistinguishable candles across 9 distinguishable cakes. If each cake can have at most 9 candles, how many ways can the candles be placed?
3. [4] Grandma uses 1 part sugar, 2 parts butter and 3 parts flour to bake shortbread cookies. However, before she can make the cookies, Johnny eats 8 grams of sugar. Grandma makes cookies until she runs out of sugar. How many grams of extra ingredients is she left with?
4. [4] Grant bakes brownies for his 85 friends in a unit square tray. He cuts the brownies into 85 pieces, as shown below. What is the area of the largest piece?



Round 2

5. [5] On a rectangular page $ABCD$, Celine marks point P lies on segment \overline{AC} such that $AP = 10$. If the distances from P to sides \overline{BC} and \overline{CD} are 3 and 4, respectively, what is the area of $ABCD$?
6. [5] For homework, Stanley is assigned reading from pages A to B . Stanley does $\frac{1}{6}$ of the homework, reading from pages 202 to 214. What is $B - A$?
7. [5] Evan reads 35 pages of a book, starting somewhere in the middle. Then, Albert reads the next 30 pages. They discover that the sum of the page numbers they read were the same. What was this sum?
8. [5] A 12-hour digital clock is in sync with an analog clock. While reading, Alice observes that the minute and hour hands of the analog clock point in exactly opposite directions. What hour must it *not* show on the digital clock? (The hands of the analog clock move continuously.)

Round 3

9. [6] Let n be a positive integer. Let G be a divisor of n and let D be a divisor of $n + 1$. If $GD = 225$, what is the minimum possible value of n ?
10. [6] Rob announces the schedule for the next four versions of Geometry Dash:

| Version | Date |
|---------|---------------------|
| 2.3 | June 21st, 2026 |
| 2.4 | November 4th, 2026 |
| 2.5 | November 19th, 2027 |
| 2.6 | June 7th, 2028 |

If X is the number of days between the release of 2.3 and 2.4, and Y is the number of days between the release of 2.5 and 2.6, what is $X + Y$?

11. [6] Benny is playing Clubstep. In each attempt, he either beats the level or dies at some integer percentage from 1% to 99%. If he starts at 0%, for each integer $1 \leq x \leq 99$, he has an $x\%$ chance of dying $x\%$ or before in the level. If Benny starts playing Clubstep from the start of 97% (the moment the progress bar moves from 96% to 97%), what is the probability he dies at 98%? Express your answer as a fraction.
12. [6] Albert is designing a custom cube (square). He begins with square $ABCD$ and selects a point P on side \overline{AB} such that $AP = 2$ and $PB = 4$. He then adds points Q and R on sides \overline{DA} and \overline{BC} , respectively, such that the areas of $\triangle DPR$ and $\triangle CPQ$ are both equal to 15. If lines \overline{CQ} and \overline{DR} meet at X , what is PX ?

Round 4

13. [7] Angelica creates an infinite string of integers by writing $1, 2, 3, \dots$ in a row as follows:

1234567891011121314...

What five digits appear right before the first occurrence of the substring 54345?

14. [7] A debate tournament contains 5 students who are ranked $1, 2, \dots, 5$. Pat does not know the ranking of the students. She randomly chooses six pairs of players without replacement, and is told the higher ranked student among each pair. What is the probability that this information allows Pat to determine each student's ranking?
15. [7] A *hexomino* is a shape made from 6 connected unit squares. Grant's job is to partition a 2×60 rectangle into congruent hexominos. How many ways can he accomplish this? Partitions which differ by a rotation or reflection are considered distinct.
16. [7] Lia places her wireless earbuds at fixed points B and C on the plane with $BC = 1$. Let A be a moving point, let M be the midpoint of \overline{AB} and let G be the centroid of $\triangle ABC$. What is the area of the region formed by points A for which $AM \leq GM$?

Round 5

17. [8] Alice finds the area of a square with side length 17^5 (in base ten) and converts it to a base twelve numeral. What is the sum of the digits of this area in the base-twelve representation? (Express your answer in base ten.)
18. [8] How many sets of ten consecutive positive integers exist such that their product is a multiple of the square of the largest number?
19. [8] How many ways can Alice fill in each \square with a $+$, $-$, \times or \div such that the following equation is true? (She cannot add parentheses.)

$$1 \square 1 \square 1 \square 1 \square 1 \square 1 \square 1 = 2.$$

20. [8] Let $ABCD$ be a unit square. Points E and F lie on segments \overline{CD} and \overline{BD} , respectively, such that $CF = CE$ and $\angle EAF = 45^\circ$. What is AE ?

Round 6

21. [10] What ordered pair (x, y) of positive real numbers satisfies

$$\frac{y^2}{x^2} = \frac{x-1}{y-2} = \frac{2x+2}{2y+5}?$$

22. [10] Let $s_2(x)$ denote the sum of the digits of x when expressed in binary. How many pairs of integers (m, n) exist such that $0 \leq m < n \leq 127$ and $s_2(m) > s_2(n)$?

23. [10] Let $PABCD$ be a pyramid such that base $ABCD$ is a rectangle. Suppose the areas of faces PAB , PBC , PCD , PDA and $ABCD$ are 10, 13, 11, 14 and 6, respectively. What is AB/BC ?

24. [10] Let a and b be positive integers. If there is a unique pair of nonnegative integers (x, y) such that $ax + by = 2026$, what is the minimum possible value of $a + b$?

Estimation Round

25. [5] Estimate the number of sets of positive integers with an average of 10.
Submit a positive integer E . If the correct answer is A , you will receive $\lfloor 5.9 \min(\frac{E}{A}, \frac{A}{E}) \rfloor$ points.
26. [5] Let $s_{10}(x)$ denote the sum of the digits of x when expressed in base 10. Estimate the number of pairs of integers (m, n) with $0 \leq m \leq n \leq 127$ and $s_{10}(m) > s_{10}(n)$.
Submit a positive integer E . If the correct answer is A , you will receive $\lfloor 5.9 \min(\frac{E}{A}, \frac{A}{E})^3 \rfloor$ points.
27. [5] Estimate the total number of numerical digits that appear on the Speed, Accuracy and Team round papers. This is counted by using the CTRL+F shortcut on the PDF of each round, and therefore includes digits from items such as page numbers and problem numbers.
Submit a positive integer E . If the correct answer is A , you will receive $\lfloor 5.9 \min(\frac{E}{A}, \frac{A}{E})^2 \rfloor$ points.
28. [5] Estimate the sum of $\frac{1}{\sqrt{x}}$ over all problem numbers x that ChatGPT 5.2 was unable to solve in one attempt, across all four rounds of EMCC 2026 (excluding the Estimation Round). For example, if you think Chat missed Accuracy #4, Guts #4 and Guts #16, guess 1.25. Note that ChatGPT is allowed to write and run computer programs to solve problems with brute force.
Submit a positive real E . If the correct answer is A , you will receive $\lfloor 5.9 \min(\frac{E}{A}, \frac{A}{E})^3 \rfloor$ points.