1. **(2 points)**
Find the range of the mean, median, and mode of this data set: [3, 4, 6, 1, 2, 5, 2, 9]

2. **(2 points)**
Kyle wants to climb to the top of the League of Legends leaderboard. Every day, he plays for 3 hours, which brings him up 15 places. Every night, however, he goes down 8 places. If he starts at place 394, how many days will it take him to get to #1?

3. **(2 points)**
How many prime numbers are between 1 and 40, inclusive?

4. **(2 points)**
What is $((3 + 4) \times 5) - (8/2) + 4$?

5. **(3 points)**
A square has the same area as a triangle. The side length of the square is 6, and the base of the triangle is 9. What is the height of the triangle?

6. **(3 points)**
Aman wants to make the best possible team! A team consists of 1 cornerback, 1 halfback, 1 quarterback, and 1 kicker. If he can choose between 4 cornerbacks, 6 halfbacks, 2 quarterbacks, and 3 kickers, then how many possible teams can Aman make?

7. **(3 points)**
Carson wants to build a monument. He wants it in the shape of a cube with a side length of 8 feet. How much material will he need, in cubic feet, to complete his monument?

8. **(3 points)**
What is the next number in this sequence?
1, 9, 25, 49, 81, 121, 169, ___

9. **(4 points)**
Rickards has a lot of clubs. 300 people at Rickards are involved with at least one of Math Club, Science Olympiad, and Brain Bowl. 150 people are in Math Club, 138 people are in Science Olympiad, and 194 people are in Brain Bowl. If 53 people are in both Math Club and Science Olympiad, 79 people are in both Science Olympiad and Brain Bowl, and 62 people are in both Math Club and Brain Bowl, how many people are in all 3 clubs?

10. **(4 points)**
The Millennium Falcon, the starship Enterprise, and the TARDIS have a race to see who is the fastest. The Millennium Falcon goes at a speed of 100 miles per hour, the Enterprise goes at 550000 feet per hour, and the TARDIS goes at 120000 inches per minute. Which went the fastest?

11. **(4 points)**
Let:

$$\begin{aligned} A &= \text{the number of faces on an icosahedron} \\ B &= \text{the number of faces on a dodecahedron} \\ C &= \text{the number of faces on a cube} \end{aligned}$$

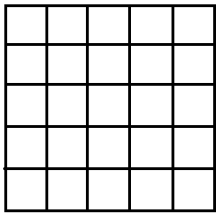
Find $A \times \dfrac{B}{C}$

12. **(4 points)**
Anvitha goes north 3 blocks, west 5 blocks, south 7 blocks, and east 8 blocks. What is the shortest distance between where Anvitha is now, and where she started?

13. **(5 points)**
Ahad needs to get an A in his History course. In this course, there are 5 tests, which are all equally weighted. On the first 3 tests, he gets a 93, 89, and a 97. Unfortunately, he gets a 73 on his 4th test (he fell asleep). What is the lowest score he can get on his last test to receive a 90 overall?

14. **(5 points)**
Let:

$$\begin{aligned} A &= \text{the remainder of } 78 \div 14 \\ B &= \frac{3}{4} - \frac{1}{2} + \frac{1}{4} - 1 \\ C &= \text{the number of squares in this figure} \end{aligned}$$



Find $(A + 2B) \times C$

15. **(5 points)**
There are 2 rectangles with integer lengths and widths that have a perimeter equal to their area. Find the area of one these rectangles.