Student Name: _____

1. Julia has summed up all the odd numbers from 1 to 49 (including 1 and 49), and Darren has summed up all the even numbers from 1 to 49. By how much is Julia's sum larger than Darren's sum?

Answer: _____

2. Two 12-hour analog clocks are hanging beside each other. One of them always shows the correct time, but the other has had its hour hand and minute hand switched. Michael's dog barks whenever both clocks look identical. For example, the dog barks at 12:00 PM. How many times does the dog bark between 1:00 PM and 11:00 PM?

Answer: _____

3. Catherine has randomly chosen a number from the set {-4, -3, -2, -1, 1, 2}. Dan has also randomly chosen a number from that set (their chosen numbers might be the same). What is the probability that the product of their numbers is positive?
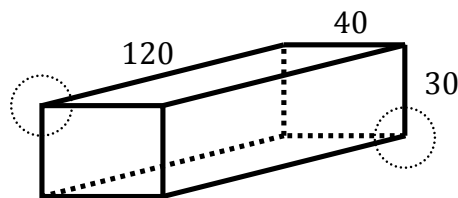
Answer: _____

4. If I were to multiply the two numbers 1,234,567,890,987,654,321 and 113,355,779,986,420, what would be the last three digits of the result?

Answer: _____

5. Change only one digit of 12110 so that the number is divisible by 225. Write down the resulting number.

Answer: _____

6. A box has width 40cm, height 30cm, and length 120cm. What is the distance between the two farthest corners of the box?
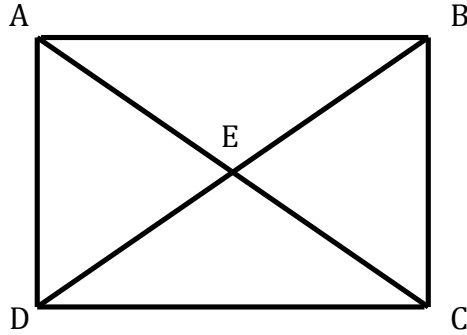

Answer: _____

7. What is the greatest number that is a factor of both 7988 and 8978?

Answer: _____

Student Name: _____

8.   In the diagram below, ABCD is a rectangle with perimeter 60. Given that the perimeter of triangle ABC is 12 more than the perimeter of triangle ABE, what is the length of AB?

Answer: _____