

NCC 2014  
Part B

Student name: \_\_\_\_\_

1. How many hours are in a week?

Answer: \_\_\_\_\_

2. Sun Tzu has positioned his soldiers in a line. There is a soldier every 2 metres. If the last soldier is 10 metres away from the first soldier, how many soldiers are there?

Answer: \_\_\_\_\_

3. A basket with five apples weighs 300 grams. After one apple is taken out of the basket, the basket then weighs 250 grams. Assuming that each apple has the same weight, how much does the basket weigh when it is empty?

Answer: \_\_\_\_\_

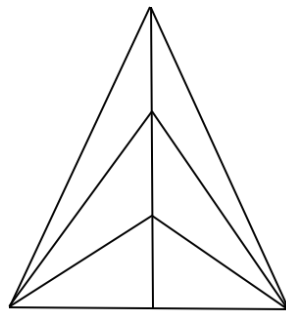
4. The area of a square is 25. What is its perimeter?

Answer: \_\_\_\_\_

5. Joey writes down the following sequence of letters: A B C D E A B C D E A B C D E...  
If the pattern continues, what is the 27th letter?

Answer: \_\_\_\_\_

6. How many triangles are in the figure below?



Answer: \_\_\_\_\_

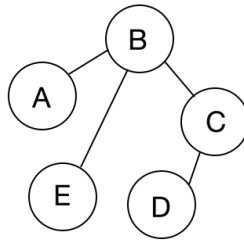
7. Harry has 5 pairs of socks in his drawer. He closes his eyes and takes out one sock at a time from his drawer. What is the **least** number of individual socks that Harry must take out to **ensure** that he gets a matching pair?

Answer: \_\_\_\_\_

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8. 5 lamps are connected by wires, as shown. A lamp can be on or off. When you flip the switch of a lamp, the state of that lamp and the state of each lamp directly connected to it changes (if it is off, it turns on, and vice-versa). In the beginning, all 5 lamps are off. What is the **least** number of switches that you have to flip in order to turn all 5 lamps on?



Answer: \_\_\_\_\_