

1.

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5. The contestants are eliminated in the following order: 5, 10, 6, 2, 9, 8, 1, 4, 7. That leaves .

6.

7. Let s and d be the number of students and desks in the room. $\frac{4}{5}s = \frac{5}{6}d$. If you cross-multiply, you get $24s = 25d$. This means that the number of students has to be a multiple of 25. The least possible number of students in the class is the least possible multiple of 25: .

8. The worst case scenario, Sonya removes all the black socks first. To be assured of getting two white socks, she must remove 6 socks (in case they are all black) and then 2 more socks.

9. Each round, every two people will play one match. In the case of an odd number of people, one person will sit out until the following round. One person is eliminated for each match played. The following table details the tournament:

Round	1	2	3	4	5
Players	20	10	5	3	2
Matches	10	5	2	1	1

Thus we have $10 + 5 + 2 + 1 + 1 =$ matches.

10. Since 10 students are taking both, $24 - 10 = 14$ students are taking only algebra. The number of students taking algebra or drafting but not both is $14 + 11 =$.