４期生数学サブゼミテスト⑦

About 30 minutes

NOTICE

1 All the numbers in this test are real number, if there is no notice.
2 Hurry up as fast as possible.
3 If you have any questions, raise your hand quietly and let officer know.
4 You can use pencil and ruler.
5 You must answer on “answer sheet” differentiated from “question sheet”. If you answer on “question sheet”, you will get no score with the answers.
6 Write your name at the top space on the answer sheet.
7 You can also get some scores from the process of answering.
In other word, you must write the process.

1. Define these words.
(1) function (2) dependent variable (3) independent variable

2. Explain the sign:$\sum$.

3. Explain the condition that $\frac{a}{b}$ is able to exist.

4. Multiply out $\sum_{k=1}^{n}\sum_{i=1}^{k} nk$.

5. Draw these functions.
(1) $y=2x+3$ (2) $y=x^2-2x+3$ (3) $y=\frac{2}{x}$ (4) $y=\frac{2x-1}{x+1}$
(5) $y=\sqrt{2x+4}$

6. Solve this inequality: $4(2-x)<3-7(x+1)$

7. Find the coordinate of intersection $y=\sqrt{2x+1}$ and $y=x-1$.

8. Find the max point and minimum point of $x+2y$,
subject to $x+y-3\le 0$ and $x+4y\ge 0$ and $5x-4y+3\le 0$

9. The following table shows the value and the probability of the value.
Evaluate expectation, variance and standard deviation.

value	0	5	10
Probability	1/2	1/3	1/6

Good Luck!