

2019年天津河西区高三一模文科数学试卷(答案)

一、选择题 (本大题共8题, 每小题5分, 共计40分)

1. C
2. C
3. A
4. D
5. D
6. D
7. A
8. B

二、填空题 (本大题共6题, 每小题5分, 共计30分)

9. $\frac{3}{5} + \frac{4}{5}i$
10. 2
11. 3
12. $(x-2)^2 + y^2 = 10$
13. 64
14. -7

三、解答题 (本大题共6题, 共计80分)

15. (1) 应从甲、丙两个车间分别抽取4件和1件, 样本容量 $n = 7$.

(2) 1. $\{A_1, A_2\}, \{A_1, A_3\}, \{A_1, A_4\}, \{A_1, A_5\}, \{A_1, A_6\}, \{A_1, A_7\}, \{A_2, A_3\}, \{A_2, A_4\}, \{A_2, A_5\}, \{A_2, A_6\}, \{A_2, A_7\},$
 $\{A_3, A_4\}, \{A_3, A_5\}, \{A_3, A_6\}, \{A_3, A_7\}, \{A_4, A_5\}, \{A_4, A_6\}, \{A_4, A_7\}, \{A_5, A_6\}, \{A_5, A_7\}, \{A_6, A_7\}.$

2. $\frac{2}{3}.$

16. (1) $\frac{\pi}{3}.$
- (2) $\frac{2}{\sqrt{7}}; -\frac{11}{14}.$

17. (1) 证明见解析.

(2) $\frac{\sqrt{3}}{3}.$

(3) $\frac{\sqrt{6}}{3}.$

18. (1) $3n+1;$

(2) $T_n = 3n \cdot 2^{n+2}.$

19. (1) $\frac{x^2}{2} + y^2 = 1.$
- (2) $\frac{\sqrt{5}}{5}.$

20. (1) 1 $f(x)_{\max} = f(2) = 24, f(x)_{\min} = -12.$

2 $0 < t < 8.$

(2) $-4 \leq a + b \leq 8.$