

2019~2020学年天津红桥区天津市复兴中学高二下学期期中数学试卷(答案)

一、选择题

1. C

2. C

3. A

4. A

5. B

6. A

7. B

8. D

二、填空题

9. $-1 + i; \sqrt{2}$ 10. $\frac{\sqrt{3}}{2}$ 11. $-\frac{4}{5}$ 12. $\sqrt{2}; 1$ 13. $\left(-\frac{1}{3}, 1\right]$

三、解答题

14. (1) $\sin \alpha = -\frac{3}{5}, \tan \alpha = \frac{3}{4}.$ (2) $\frac{31}{50}\sqrt{2}.$ 15. (1) $A \cup B = \{x|x > 0\}, A \cap B = \{x|1 < x < 8\}.$ (2) $[3, +\infty).$ 16. (1) $T = 2\pi, f(x) = \sin\left(x + \frac{\pi}{6}\right).$ (2) $\frac{\sqrt{3}}{2}, \sqrt{3}.$ 17. (1) $f(x) = \left(x + \frac{1}{2}\right)^2 + \frac{7}{4}.$ (2)
$$f(x)_{\min} = \begin{cases} \left(m + \frac{1}{2}\right)^2 + \frac{7}{4}, & m < -\frac{1}{2} \\ \frac{7}{4}, & -\frac{1}{2} \leq m \leq \frac{3}{2} \\ \left(m - \frac{3}{2}\right)^2 + \frac{7}{4}, & m > \frac{3}{2} \end{cases}.$$
(3) $a \geq \frac{14}{3}.$