

2020年天津河北区高三二模数学试卷(答案)

一、选择题

1. B

2. C

3. A

4. D

5. C

6. A

7. B

8. D

9. B

二、填空题

10. 15

11. $(x-1)^2 + (y-3)^2 = 9$ 或 $(x+1)^2 + (y+3)^2 = 9$ 12. $e+1; (e+1)x - y - 2 = 0$ 13. $3+6\sqrt{2}$ 14. $\frac{5}{2}$ 15. $\left(0, \frac{1}{2}\right) \cup (1, 2)$

三、解答题

16. (1) $\frac{\pi}{3}$.
 (2) $\frac{2\sqrt{2}-\sqrt{3}}{6}$.
 (3) 8.

17. (1) 证明见解析.
 (2) $\frac{\sqrt{5}}{5}$.
 (3) $\frac{\sqrt{285}}{19}$.

18. (1) 证明见解析.
 (2) $T_n = \frac{1}{4} - \frac{1}{2 \times 3^n + 2}$.

19. (1) $\frac{x^2}{9} + \frac{y^2}{8} = 1$.
 (2) $2\sqrt{6}x - y + 2\sqrt{6} = 0$.

20. (1) $\left(-\infty, -\frac{1}{e^3}\right]$.
 (2) $(2, +\infty)$.

