

2017~2018学年广东广州荔湾区、海珠区统考高 一下学期期末数学试卷

一、选择题：每题5分,共60分

- 1 D 2 C 3 B 4 A 5 D 6 C 7 B 8 D 9 A 10 B 11 C
12 B

二、填空题：每题5分,共20分

13 1

14 $0 < a < 1$

15 2

16 $\frac{7\pi}{3}$

17 (1) $\vec{a} \cdot \vec{b} = \pm\sqrt{2}$.
(2) $\theta = \frac{\pi}{4}$.

三、解答题：共6小题，共70分

18 (1) $a_n = 2 + n (n \in \mathbf{N}^*)$.

(2) 2101 .

19 (1)

$\omega x + \varphi$	0	$\frac{\pi}{2}$	π	$\frac{3\pi}{2}$	2π
x	$\frac{\pi}{12}$	$\frac{\pi}{3}$	$\frac{7}{12}\pi$	$\frac{5\pi}{6}$	$\frac{13}{2}\pi$
$A \sin(\omega x + \varphi)$	0	3	0	-3	0

$f(x) = 3 \sin\left(2x - \frac{\pi}{6}\right)$.

(2) $f\left(\frac{\pi}{3}\right)$ 取最大值, $f\left(\frac{\pi}{3}\right) = 3$,

$f(0)$ 取最小值, $f(0) = -\frac{3}{2}$.

20 (1) $A = \frac{\pi}{3}$.

(2) $a = \sqrt{7}$.

21 (1) $\frac{3\sqrt{10}}{10}$.

(2) $2\sqrt{10}$.

22 (1) $a_n = n^2$.

(2) $S_n = 2(1 - 2^n) + n \cdot 2^{n+1}$.