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| 2016年湖南省普通高中学业水平考试试卷 |



**一、选择题****（本大题共10小题，每小题4分，共40分。）**

1、图1是某圆柱的直观图,则其正视图是( )

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| A.三角形 |
| B.梯形 |
| C.矩形 |
| D.圆 |

2、函数( )

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| A.http://zxhx.cn-bj.ufileos.com/teacher%2Fuploadfiles%2Fwordimg%2F321%2F2019%2F05%2F24%2F5ce7486a68622.png |
| B.http://zxhx.cn-bj.ufileos.com/teacher%2Fuploadfiles%2Fwordimg%2F321%2F2019%2F05%2F24%2F5ce7486a79345.png |
| C.http://zxhx.cn-bj.ufileos.com/teacher%2Fuploadfiles%2Fwordimg%2F321%2F2019%2F05%2F24%2F5ce7486a90109.png |
| D.http://zxhx.cn-bj.ufileos.com/teacher%2Fuploadfiles%2Fwordimg%2F321%2F2019%2F05%2F24%2F5ce7486aa1407.png |

3、( )

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| A.2 |
| B.http://zxhx.cn-bj.ufileos.com/teacher%2Fuploadfiles%2Fwordimg%2F321%2F2019%2F05%2F24%2F5ce7486ae2f2e.png |
| C.http://zxhx.cn-bj.ufileos.com/teacher%2Fuploadfiles%2Fwordimg%2F321%2F2019%2F05%2F24%2F5ce7486af1715.png |
| D.http://zxhx.cn-bj.ufileos.com/teacher%2Fuploadfiles%2Fwordimg%2F321%2F2019%2F05%2F24%2F5ce7486b0d6ad.png |

4、执行如图2所示的程序框图,若输入a,b的值分别为4,3,则输出的S=( )

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| A.7 |
| B.8 |
| C.10 |
| D.12 |

5、( )

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| A.http://zxhx.cn-bj.ufileos.com/teacher%2Fuploadfiles%2Fwordimg%2F321%2F2019%2F05%2F24%2F5ce7486b3db2f.png |
| B.http://zxhx.cn-bj.ufileos.com/teacher%2Fuploadfiles%2Fwordimg%2F321%2F2019%2F05%2F24%2F5ce7486b45628.png |
| C.http://zxhx.cn-bj.ufileos.com/teacher%2Fuploadfiles%2Fwordimg%2F321%2F2019%2F05%2F24%2F5ce7486b4ed08.png |
| D.&Oslash; |

6、已知不等式组 表示的平面区域为 ,则下列坐标对应的点落在区域内 的是( )

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| A.(1,1) |
| B.http://zxhx.cn-bj.ufileos.com/teacher%2Fuploadfiles%2Fwordimg%2F321%2F2019%2F05%2F24%2F5ce7486b7f0f4.png |
| C.(0,5) |
| D.(5,1) |

7、已知向量,, 若,则( )

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| A.http://zxhx.cn-bj.ufileos.com/teacher%2Fuploadfiles%2Fwordimg%2F321%2F2019%2F05%2F24%2F5ce7486ba52e2.png |
| B.http://zxhx.cn-bj.ufileos.com/teacher%2Fuploadfiles%2Fwordimg%2F321%2F2019%2F05%2F24%2F5ce7486bb0e06.png |
| C.1 |
| D.3 |

8、已知函数 的图象如图3所示,则不等式的解集为( )

|  |
| --- |
| A.http://zxhx.cn-bj.ufileos.com/teacher%2Fuploadfiles%2Fwordimg%2F321%2F2019%2F05%2F24%2F5ce7486be6899.png |
| B.http://zxhx.cn-bj.ufileos.com/teacher%2Fuploadfiles%2Fwordimg%2F321%2F2019%2F05%2F24%2F5ce7486bed392.png |
| C.http://zxhx.cn-bj.ufileos.com/teacher%2Fuploadfiles%2Fwordimg%2F321%2F2019%2F05%2F24%2F5ce7486c01935.png或http://zxhx.cn-bj.ufileos.com/teacher%2Fuploadfiles%2Fwordimg%2F321%2F2019%2F05%2F24%2F5ce7486c08028.png |
| D.http://zxhx.cn-bj.ufileos.com/teacher%2Fuploadfiles%2Fwordimg%2F321%2F2019%2F05%2F24%2F5ce7486c0ef7a.png或http://zxhx.cn-bj.ufileos.com/teacher%2Fuploadfiles%2Fwordimg%2F321%2F2019%2F05%2F24%2F5ce7486c15a93.png |

9、已知两直线和的交点为M,则以点M为圆心,半径长为1的圆的方程是( )

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| --- |
| A.http://zxhx.cn-bj.ufileos.com/teacher%2Fuploadfiles%2Fwordimg%2F321%2F2019%2F05%2F24%2F5ce7486c463e2.png |
| B.http://zxhx.cn-bj.ufileos.com/teacher%2Fuploadfiles%2Fwordimg%2F321%2F2019%2F05%2F24%2F5ce7486c587a2.png |
| C.http://zxhx.cn-bj.ufileos.com/teacher%2Fuploadfiles%2Fwordimg%2F321%2F2019%2F05%2F24%2F5ce7486c7a7b8.png |
| D.http://zxhx.cn-bj.ufileos.com/teacher%2Fuploadfiles%2Fwordimg%2F321%2F2019%2F05%2F24%2F5ce7486c8da62.png |

10、某社区有300户居民,为了解该社区居民的用水情况,从中随机抽取一部分住户某年每月的用水量(单位:t)进行分析,得到这些住户月均用水量的频率分布直方图(如图4),由此可以估计该社区居民月均用水量在 的住户数为( )

|  |
| --- |
| A.50 |
| B.80 |
| C.120 |
| D.150 |

**二、填空题****（本大题共5小题，每小题4分，共20分。）**

11、若,则.

12、已知直线 ,. 若 ,则.

13、已知幂函数(为常数)的图象经过点 ,则 .

14、在中,角 的对边分别为 . 若,, ,则.

15、某车间为了规定工时定额,需要确定加工零件所花费的时间,为此收集若干数据,并对数据进行分析,得到加工时间 与零件数(个)的回归方程为 . 由此可以预测,当零件数为100个时,加工时间为.

**三、解答题（本大题共5小题，第16题6分，第17、18、19题8分，第20题10分，共40分。）**

16、从一个装有3个红球 和2个白球 的盒子中,随机取出2个球.

(1)用球的标号列出所有可能的取出结果;

(2)求取出的2个球都是红球的概率.

17、已知函数 .

(1)求 的值;

(2)求 的最小值,并写出取最小值时自变量的集合.

18、已知等差数列的公差,且 .

(1)求 及 ;

(2)若等比数列 满足,,求数列的前项的和 .



19、如图5,四棱锥的底面是边长为2的菱形, 底面 .

(1)求证: 平面 ;

(2)若 ,直线与平面所成的角为,求四棱锥的体积.

20、

2016年湖南省普通高中学业水平考试试卷答案解析

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| 第1题答案C第1题解析 |
| 第2题答案A第2题解析 |
| 第3题答案B第3题解析 |
| 第4题答案D第4题解析 |
| 第5题答案C第5题解析 |
| 第6题答案A第6题解析 |
| 第7题答案A第7题解析 |
| 第8题答案B第8题解析 |
| 第9题答案D第9题解析 |
| 第10题答案C第10题解析 |
| 第11题答案     5第11题解析 |
| 第12题答案     3第12题解析 |
| 第13题答案     http://zxhx.cn-bj.ufileos.com/teacher%2Fuploadfiles%2Fwordimg%2F321%2F2019%2F05%2F24%2F5ce7486d0a31a.png第13题解析 |
| 第14题答案     4第14题解析 |
| 第15题答案     118第15题解析 |
| 第16题答案 见解答第16题解析http://zxhx.cn-bj.ufileos.com/teacher%2Fuploadfiles%2Fwordimg%2F321%2F2019%2F05%2F24%2F5ce7486f04e81.png |
| 第17题答案 见解答第17题解析http://zxhx.cn-bj.ufileos.com/teacher%2Fuploadfiles%2Fwordimg%2F321%2F2019%2F05%2F24%2F5ce7486f73ef4.png |
| 第18题答案 见解答第18题解析http://zxhx.cn-bj.ufileos.com/teacher%2Fuploadfiles%2Fwordimg%2F321%2F2019%2F05%2F24%2F5ce7487116338.png |
| 第19题答案见解答第19题解析http://zxhx.cn-bj.ufileos.com/teacher%2Fuploadfiles%2Fwordimg%2F321%2F2019%2F05%2F24%2F5ce74871d32c8.png |
| 第20题答案 见解答第20题解析http://zxhx.cn-bj.ufileos.com/teacher%2Fuploadfiles%2Fwordimg%2F321%2F2019%2F05%2F24%2F5ce748720168d.pnghttp://zxhx.cn-bj.ufileos.com/teacher%2Fuploadfiles%2Fwordimg%2F321%2F2019%2F05%2F24%2F5ce7487209dd1.png |