{'headers': {'date': 'Sun, 14 Apr 2024 10:10:30 GMT', 'content-type': 'application/json;charset=utf-8', 'content-length': '32336', 'connection': 'keep-alive', 'keep-alive': 'timeout=25', 'vary': 'Accept-Encoding', 'access-control-allow-origin': '\*', 'access-control-expose-headers': '\*', 'x-acs-request-id': 'BD5DA3D4-17AB-5BE2-A9E2-234E1D1DECAC', 'x-acs-trace-id': '115634a070c671048b7205df91b51994', 'etag': '3TGOuRe9cBEvWcp+xZknEfg7'}, 'statusCode': 200, 'body': {'Data': '{"algo\_version":"","doc\_layout":[{"layout\_type":"text","pos":[{"x":77,"y":1259},{"x":77,"y":1354},{"x":1573,"y":1353},{"x":1573,"y":1259}]},{"layout\_type":"text","pos":[{"x":78,"y":123},{"x":78,"y":220},{"x":1571,"y":220},{"x":1571,"y":123}]},{"layout\_type":"text","pos":[{"x":79,"y":1582},{"x":79,"y":1723},{"x":1572,"y":1723},{"x":1572,"y":1582}]},{"layout\_type":"text","pos":[{"x":76,"y":1951},{"x":76,"y":2096},{"x":1574,"y":2096},{"x":1574,"y":1951}]},{"layout\_type":"text","pos":[{"x":79,"y":288},{"x":79,"y":329},{"x":923,"y":329},{"x":923,"y":287}]},{"layout\_type":"text","pos":[{"x":73,"y":1366},{"x":73,"y":1413},{"x":1371,"y":1413},{"x":1371,"y":1366}]},{"layout\_type":"text","pos":[{"x":76,"y":559},{"x":76,"y":599},{"x":382,"y":599},{"x":382,"y":559}]},{"layout\_type":"text","pos":[{"x":76,"y":1532},{"x":76,"y":1571},{"x":383,"y":1571},{"x":383,"y":1532}]},{"layout\_type":"text","pos":[{"x":81,"y":1743},{"x":81,"y":1842},{"x":848,"y":1842},{"x":848,"y":1743}]},{"layout\_type":"text","pos":[{"x":80,"y":1422},{"x":80,"y":1468},{"x":971,"y":1468},{"x":971,"y":1422}]},{"layout\_type":"text","pos":[{"x":145,"y":233},{"x":145,"y":274},{"x":1373,"y":274},{"x":1373,"y":233}]},{"layout\_type":"text","pos":[{"x":80,"y":863},{"x":80,"y":911},{"x":1399,"y":911},{"x":1399,"y":863}]},{"layout\_type":"text","pos":[{"x":79,"y":1041},{"x":79,"y":1133},{"x":665,"y":1133},{"x":665,"y":1041}]},{"layout\_type":"text","pos":[{"x":77,"y":975},{"x":77,"y":1016},{"x":382,"y":1016},{"x":382,"y":975}]},{"layout\_type":"text","pos":[{"x":75,"y":618},{"x":75,"y":748},{"x":649,"y":748},{"x":649,"y":618}]},{"layout\_type":"foot","pos":[{"x":1521,"y":2270},{"x":1521,"y":2302},{"x":1555,"y":2302},{"x":1555,"y":2270}]},{"layout\_type":"text","pos":[{"x":76,"y":1206},{"x":76,"y":1246},{"x":382,"y":1246},{"x":382,"y":1206}]},{"layout\_type":"text","pos":[{"x":76,"y":1902},{"x":76,"y":1944},{"x":382,"y":1944},{"x":382,"y":1902}]},{"layout\_type":"text","pos":[{"x":77,"y":2156},{"x":77,"y":2196},{"x":382,"y":2196},{"x":382,"y":2156}]},{"layout\_type":"text","pos":[{"x":77,"y":812},{"x":77,"y":852},{"x":383,"y":852},{"x":383,"y":812}]},{"layout\_type":"text","pos":[{"x":76,"y":2156},{"x":76,"y":2248},{"x":383,"y":2248},{"x":383,"y":2156}]},{"layout\_type":"text","pos":[{"x":147,"y":413},{"x":147,"y":471},{"x":1151,"y":471},{"x":1151,"y":413}]}],"doc\_sptext":[{"layout\_type":"bold","pos":[{"x":81,"y":1535},{"x":81,"y":1570},{"x":381,"y":1570},{"x":381,"y":1535}]},{"layout\_type":"bold","pos":[{"x":81,"y":562},{"x":81,"y":597},{"x":381,"y":597},{"x":381,"y":562}]},{"layout\_type":"bold","pos":[{"x":80,"y":2158},{"x":80,"y":2194},{"x":382,"y":2194},{"x":382,"y":2158}]},{"layout\_type":"bold","pos":[{"x":79,"y":1208},{"x":79,"y":1243},{"x":382,"y":1243},{"x":382,"y":1208}]},{"layout\_type":"bold","pos":[{"x":82,"y":978},{"x":82,"y":1013},{"x":382,"y":1013},{"x":382,"y":978}]},{"layout\_type":"bold","pos":[{"x":80,"y":1906},{"x":80,"y":1942},{"x":382,"y":1942},{"x":382,"y":1906}]},{"layout\_type":"bold","pos":[{"x":81,"y":815},{"x":81,"y":849},{"x":382,"y":849},{"x":382,"y":815}]},{"layout\_type":"bold","pos":[{"x":1524,"y":2273},{"x":1524,"y":2300},{"x":1554,"y":2300},{"x":1554,"y":2272}]},{"layout\_type":"bold","pos":[{"x":1179,"y":131},{"x":1179,"y":159},{"x":1199,"y":159},{"x":1199,"y":131}]}],"doc\_subfield":[{"layout\_type":"single","pos":[{"x":69,"y":125},{"x":69,"y":2276},{"x":1578,"y":2276},{"x":1578,"y":125}]}],"figure":[{"type":"subject\_bracket","x":816,"y":294,"w":107,"h":34,"box":{"x":0,"y":0,"w":0,"h":0,"angle":-90},"points":[{"x":816,"y":294},{"x":923,"y":294},{"x":923,"y":328},{"x":816,"y":328}]},{"type":"subject\_bracket","x":945,"y":185,"w":106,"h":34,"box":{"x":0,"y":0,"w":0,"h":0,"angle":-90},"points":[{"x":945,"y":185},{"x":1051,"y":185},{"x":1051,"y":219},{"x":946,"y":219}]},{"type":"subject\_pattern","x":79,"y":616,"w":575,"h":128,"box":{"x":0,"y":0,"w":0,"h":0,"angle":-90},"points":[{"x":79,"y":616},{"x":654,"y":616},{"x":654,"y":744},{"x":79,"y":744}]},{"type":"subject\_question","x":0,"y":0,"w":0,"h":0,"box":{"x":824,"y":198,"w":152,"h":1510,"angle":-90},"points":[{"x":70,"y":122},{"x":1578,"y":122},{"x":1578,"y":274},{"x":70,"y":273}]},{"type":"subject\_question","x":0,"y":0,"w":0,"h":0,"box":{"x":661,"y":383,"w":200,"h":1156,"angle":-90},"points":[{"x":83,"y":283},{"x":1238,"y":283},{"x":1238,"y":483},{"x":83,"y":483}]},{"type":"subject\_question","x":0,"y":0,"w":0,"h":0,"box":{"x":357,"y":675,"w":141,"h":575,"angle":-90},"points":[{"x":69,"y":604},{"x":644,"y":604},{"x":644,"y":744},{"x":69,"y":744}]},{"type":"subject\_question","x":0,"y":0,"w":0,"h":0,"box":{"x":369,"y":1086,"w":82,"h":593,"angle":-90},"points":[{"x":73,"y":1045},{"x":665,"y":1045},{"x":665,"y":1128},{"x":73,"y":1128}]},{"type":"subject\_question","x":0,"y":0,"w":0,"h":0,"box":{"x":728,"y":887,"w":119,"h":1314,"angle":-90},"points":[{"x":71,"y":827},{"x":1385,"y":828},{"x":1385,"y":945},{"x":72,"y":945}]},{"type":"subject\_question","x":0,"y":0,"w":0,"h":0,"box":{"x":824,"y":1357,"w":217,"h":1515,"angle":-90},"points":[{"x":66,"y":1248},{"x":1580,"y":1248},{"x":1580,"y":1464},{"x":66,"y":1464}]},{"type":"subject\_question","x":0,"y":0,"w":0,"h":0,"box":{"x":825,"y":1661,"w":142,"h":1506,"angle":-90},"points":[{"x":72,"y":1590},{"x":1578,"y":1590},{"x":1578,"y":1731},{"x":72,"y":1731}]},{"type":"subject\_question","x":0,"y":0,"w":0,"h":0,"box":{"x":824,"y":2016,"w":140,"h":1511,"angle":-90},"points":[{"x":69,"y":1947},{"x":1579,"y":1947},{"x":1579,"y":2086},{"x":69,"y":2085}]},{"type":"subject\_ansbox","x":0,"y":0,"w":0,"h":0,"box":{"x":869,"y":311,"w":37,"h":103,"angle":-90},"points":[{"x":817,"y":292},{"x":920,"y":292},{"x":920,"y":328},{"x":817,"y":328}]},{"type":"subject\_ansbox","x":0,"y":0,"w":0,"h":0,"box":{"x":997,"y":200,"w":36,"h":105,"angle":-90},"points":[{"x":945,"y":182},{"x":1049,"y":182},{"x":1049,"y":218},{"x":945,"y":218}]}],"height":2339,"orgHeight":2339,"orgWidth":1654,"page\_id":0,"page\_title":"","part\_info":[{"part\_title":"","pos\_list":[[{"x":78,"y":126},{"x":1571,"y":126},{"x":1571,"y":485},{"x":78,"y":491}]],"subject\_list":[{"index":0,"type":0,"num\_choices":0,"prob":0,"text":"(4)设A是n阶实对称矩阵,P是n阶可逆矩阵.已知n维列向量α是A的属于特征值λ的特征向量,则矩阵$$\\\\left( P ^ { - 1 } A P \\\\right) ^ { T }$$属于特征值λ的特征向量是( )$$\\\\left( A \\\\right) P ^ { - 1 } \\\\alpha .$$ $$\\\\left( B \\\\right) P ^ { T } \\\\alpha .$$ (C)Pα. $$\\\\left( D \\\\right) \\\\left( P ^ { - 1 } \\\\right) ^ { T } \\\\alpha .$$","figure\_list":[],"table\_list":[],"answer\_list":[[{"x":945,"y":182},{"x":1049,"y":182},{"x":1049,"y":218},{"x":945,"y":218}]],"pos\_list":[[{"x":70,"y":122},{"x":1578,"y":122},{"x":1578,"y":275},{"x":70,"y":275}]],"element\_list":[{"type":0,"text":"(4)设A是n阶实对称矩阵,P是n阶可逆矩阵.已知n维列向量α是A的属于特征值λ的特征向量,则矩阵$$\\\\left( P ^ { - 1 } A P \\\\right) ^ { T }$$属于特征值λ的特征向量是( )","pos\_list":[[{"x":78,"y":126},{"x":1571,"y":126},{"x":1571,"y":218},{"x":78,"y":218}]],"content\_list":[{"type":1,"prob":99,"string":"(4)设A是n阶实对称矩阵,P是n阶可逆矩阵.已知n维列向量","option":"","pos":[{"x":78,"y":131},{"x":1097,"y":127},{"x":1097,"y":158},{"x":78,"y":162}]},{"type":1,"prob":99,"string":"α","option":"","pos":[{"x":1097,"y":134},{"x":1126,"y":134},{"x":1126,"y":160},{"x":1097,"y":160}]},{"type":1,"prob":97,"string":"是A的属于特征值λ的特征","option":"","pos":[{"x":1126,"y":127},{"x":1570,"y":126},{"x":1571,"y":157},{"x":1126,"y":158}]},{"type":1,"prob":99,"string":"向量,则矩阵","option":"","pos":[{"x":148,"y":182},{"x":345,"y":182},{"x":345,"y":213},{"x":148,"y":213}]},{"type":2,"prob":97,"string":"$$\\\\left( P ^ { - 1 } A P \\\\right) ^ { T }$$","option":"","pos":[{"x":345,"y":176},{"x":496,"y":176},{"x":496,"y":218},{"x":345,"y":217}]},{"type":1,"prob":99,"string":"属于特征值λ的特征向量是()","option":"","pos":[{"x":496,"y":182},{"x":1047,"y":182},{"x":1047,"y":213},{"x":496,"y":213}]}]},{"type":0,"text":"$$\\\\left( A \\\\right) P ^ { - 1 } \\\\alpha .$$ $$\\\\left( B \\\\right) P ^ { T } \\\\alpha .$$ (C)Pα. $$\\\\left( D \\\\right) \\\\left( P ^ { - 1 } \\\\right) ^ { T } \\\\alpha .$$","pos\_list":[[{"x":151,"y":232},{"x":1370,"y":226},{"x":1370,"y":274},{"x":151,"y":280}]],"content\_list":[{"type":2,"prob":97,"string":"$$\\\\left( A \\\\right) P ^ { - 1 } \\\\alpha .$$","option":"","pos":[{"x":151,"y":232},{"x":295,"y":231},{"x":295,"y":273},{"x":151,"y":273}]},{"type":2,"prob":96,"string":"$$\\\\left( B \\\\right) P ^ { T } \\\\alpha .$$","option":"","pos":[{"x":495,"y":233},{"x":623,"y":232},{"x":623,"y":273},{"x":495,"y":273}]},{"type":1,"prob":93,"string":"(C)Pα.","option":"","pos":[{"x":836,"y":235},{"x":948,"y":235},{"x":948,"y":273},{"x":836,"y":273}]},{"type":2,"prob":98,"string":"$$\\\\left( D \\\\right) \\\\left( P ^ { - 1 } \\\\right) ^ { T } \\\\alpha .$$","option":"","pos":[{"x":1166,"y":231},{"x":1369,"y":230},{"x":1370,"y":274},{"x":1167,"y":275}]}]}]},{"index":1,"type":0,"num\_choices":0,"prob":0,"text":"(5)设随机变量X和Y都服从标准正态分布,则( )(A)X+Y服从正态分布.$$\\\\left( B \\\\right) X ^ { 2 } + Y ^ { 2 }$$服从$$x ^ { 2 }$$分布.$$\\\\left( C \\\\right) X ^ { 2 }$$和$$Y ^ { 2 }$$都服从$$X ^ { 2 }$$分布. $$\\\\left( D \\\\right) \\\\frac { X ^ { 2 } } { Y ^ { 2 } }$$服从F分布","figure\_list":[],"table\_list":[],"answer\_list":[[{"x":817,"y":292},{"x":920,"y":292},{"x":920,"y":328},{"x":817,"y":328}]],"pos\_list":[[{"x":78,"y":283},{"x":1238,"y":283},{"x":1238,"y":486},{"x":78,"y":486}]],"element\_list":[{"type":0,"text":"(5)设随机变量X和Y都服从标准正态分布,则( )","pos\_list":[[{"x":78,"y":292},{"x":918,"y":292},{"x":918,"y":323},{"x":78,"y":323}]],"content\_list":[{"type":1,"prob":98,"string":"(5)设随机变量X和Y都服从标准正态分布,则()","option":"","pos":[{"x":78,"y":292},{"x":918,"y":292},{"x":918,"y":323},{"x":78,"y":323}]}]},{"type":0,"text":"(A)X+Y","pos\_list":[[{"x":150,"y":343},{"x":303,"y":342},{"x":304,"y":382},{"x":150,"y":383}]],"content\_list":[{"type":1,"prob":99,"string":"(A)X+Y","option":"","pos":[{"x":150,"y":343},{"x":303,"y":342},{"x":304,"y":382},{"x":150,"y":383}]}]},{"type":0,"text":"服从正态分布.","pos\_list":[[{"x":303,"y":346},{"x":531,"y":346},{"x":531,"y":377},{"x":303,"y":378}]],"content\_list":[{"type":1,"prob":99,"string":"服从正态分布.","option":"","pos":[{"x":303,"y":346},{"x":531,"y":346},{"x":531,"y":377},{"x":303,"y":378}]}]},{"type":0,"text":"$$\\\\left( B \\\\right) X ^ { 2 } + Y ^ { 2 }$$","pos\_list":[[{"x":833,"y":339},{"x":1023,"y":337},{"x":1023,"y":384},{"x":833,"y":385}]],"content\_list":[{"type":2,"prob":99,"string":"$$\\\\left( B \\\\right) X ^ { 2 } + Y ^ { 2 }$$","option":"","pos":[{"x":833,"y":339},{"x":1023,"y":337},{"x":1023,"y":384},{"x":833,"y":385}]}]},{"type":0,"text":"服从","pos\_list":[[{"x":1022,"y":346},{"x":1094,"y":346},{"x":1094,"y":378},{"x":1022,"y":378}]],"content\_list":[{"type":1,"prob":99,"string":"服从","option":"","pos":[{"x":1022,"y":346},{"x":1094,"y":346},{"x":1094,"y":378},{"x":1022,"y":378}]}]},{"type":0,"text":"$$x ^ { 2 }$$","pos\_list":[[{"x":1094,"y":341},{"x":1135,"y":341},{"x":1135,"y":378},{"x":1094,"y":378}]],"content\_list":[{"type":2,"prob":98,"string":"$$x ^ { 2 }$$","option":"","pos":[{"x":1094,"y":341},{"x":1135,"y":341},{"x":1135,"y":378},{"x":1094,"y":378}]}]},{"type":0,"text":"分布.","pos\_list":[[{"x":1135,"y":346},{"x":1222,"y":347},{"x":1222,"y":378},{"x":1135,"y":378}]],"content\_list":[{"type":1,"prob":99,"string":"分布.","option":"","pos":[{"x":1135,"y":346},{"x":1222,"y":347},{"x":1222,"y":378},{"x":1135,"y":378}]}]},{"type":0,"text":"$$\\\\left( C \\\\right) X ^ { 2 }$$和$$Y ^ { 2 }$$都服从$$X ^ { 2 }$$分布. $$\\\\left( D \\\\right) \\\\frac { X ^ { 2 } } { Y ^ { 2 } }$$服从F分布","pos\_list":[[{"x":150,"y":398},{"x":1142,"y":393},{"x":1143,"y":485},{"x":151,"y":491}]],"content\_list":[{"type":2,"prob":99,"string":"$$\\\\left( C \\\\right) X ^ { 2 }$$","option":"","pos":[{"x":150,"y":421},{"x":255,"y":420},{"x":255,"y":460},{"x":151,"y":461}]},{"type":1,"prob":99,"string":"和","option":"","pos":[{"x":255,"y":424},{"x":296,"y":424},{"x":296,"y":457},{"x":255,"y":457}]},{"type":2,"prob":99,"string":"$$Y ^ { 2 }$$","option":"","pos":[{"x":296,"y":419},{"x":340,"y":419},{"x":340,"y":457},{"x":296,"y":457}]},{"type":1,"prob":99,"string":"都服从","option":"","pos":[{"x":340,"y":424},{"x":442,"y":424},{"x":442,"y":456},{"x":340,"y":456}]},{"type":2,"prob":92,"string":"$$X ^ { 2 }$$","option":"","pos":[{"x":442,"y":420},{"x":487,"y":420},{"x":487,"y":457},{"x":442,"y":457}]},{"type":1,"prob":99,"string":"分布.","option":"","pos":[{"x":487,"y":423},{"x":571,"y":423},{"x":571,"y":455},{"x":487,"y":455}]},{"type":2,"prob":99,"string":"$$\\\\left( D \\\\right) \\\\frac { X ^ { 2 } } { Y ^ { 2 } }$$","option":"","pos":[{"x":835,"y":394},{"x":953,"y":394},{"x":953,"y":486},{"x":835,"y":486}]},{"type":1,"prob":99,"string":"服从F分布","option":"","pos":[{"x":952,"y":407},{"x":1141,"y":402},{"x":1143,"y":466},{"x":954,"y":471}]}]}]}]},{"part\_title":"三、(本题满分5分)","pos\_list":[[{"x":79,"y":562},{"x":654,"y":564},{"x":654,"y":744},{"x":79,"y":744}]],"subject\_list":[{"index":0,"type":15,"num\_choices":0,"prob":0,"text":"","figure\_list":[[{"x":79,"y":616},{"x":654,"y":616},{"x":654,"y":744},{"x":79,"y":744}]],"table\_list":[],"answer\_list":[[{"x":0,"y":602},{"x":1654,"y":602},{"x":1654,"y":816},{"x":0,"y":816}]],"pos\_list":[[{"x":69,"y":602},{"x":654,"y":602},{"x":654,"y":744},{"x":69,"y":744}]],"element\_list":[]}]},{"part\_title":"四、(本题满分7分)","pos\_list":[[{"x":77,"y":816},{"x":1396,"y":816},{"x":1396,"y":906},{"x":78,"y":911}]],"subject\_list":[{"index":0,"type":15,"num\_choices":0,"prob":0,"text":"四、(本题满分7分)设函数u=f(x,y,z)有连续偏导数,且z=z(x,y)由方程$$x e ^ { x } - y e ^ { y } = z e ^ { z }$$所确定,求du.","figure\_list":[],"table\_list":[],"answer\_list":[[{"x":0,"y":816},{"x":1654,"y":816},{"x":1654,"y":1030},{"x":0,"y":1030}]],"pos\_list":[[{"x":71,"y":816},{"x":1396,"y":816},{"x":1396,"y":945},{"x":72,"y":945}]],"element\_list":[{"type":0,"text":"四、(本题满分7分)","pos\_list":[[{"x":78,"y":816},{"x":382,"y":816},{"x":382,"y":847},{"x":78,"y":847}]],"content\_list":[{"type":1,"prob":99,"string":"四、(本题满分7分)","option":"","pos":[{"x":78,"y":816},{"x":382,"y":816},{"x":382,"y":847},{"x":78,"y":847}]}]},{"type":0,"text":"设函数u=f(x,y,z)有连续偏导数,且z=z(x,y)由方程$$x e ^ { x } - y e ^ { y } = z e ^ { z }$$所确定,求du.","pos\_list":[[{"x":77,"y":868},{"x":1396,"y":863},{"x":1396,"y":906},{"x":78,"y":911}]],"content\_list":[{"type":1,"prob":99,"string":"设函数","option":"","pos":[{"x":77,"y":873},{"x":196,"y":873},{"x":196,"y":905},{"x":77,"y":906}]},{"type":1,"prob":99,"string":"u=f(x,y,z)","option":"","pos":[{"x":196,"y":867},{"x":382,"y":867},{"x":382,"y":910},{"x":196,"y":910}]},{"type":1,"prob":99,"string":"有连续偏导数,且","option":"","pos":[{"x":382,"y":872},{"x":670,"y":871},{"x":670,"y":903},{"x":383,"y":904}]},{"type":1,"prob":99,"string":"z=z(x,y)","option":"","pos":[{"x":670,"y":867},{"x":826,"y":866},{"x":827,"y":908},{"x":670,"y":909}]},{"type":1,"prob":99,"string":"由方程","option":"","pos":[{"x":826,"y":870},{"x":955,"y":870},{"x":955,"y":902},{"x":826,"y":903}]},{"type":2,"prob":99,"string":"$$x e ^ { x } - y e ^ { y } = z e ^ { z }$$","option":"","pos":[{"x":955,"y":867},{"x":1177,"y":866},{"x":1177,"y":907},{"x":955,"y":908}]},{"type":1,"prob":99,"string":"所确定,求du.","option":"","pos":[{"x":1177,"y":869},{"x":1396,"y":868},{"x":1396,"y":901},{"x":1177,"y":901}]}]}]}]},{"part\_title":"五、(本题满分6分)","pos\_list":[[{"x":77,"y":979},{"x":663,"y":979},{"x":663,"y":1142},{"x":77,"y":1142}]],"subject\_list":[{"index":0,"type":15,"num\_choices":0,"prob":0,"text":"$$f \\\\left( \\\\sin ^ { 2 } x \\\\right) = \\\\frac { x } { \\\\sin x } ,$$$$\\\\frac { \\\\sqrt x } { \\\\sqrt { 1 - x } } f \\\\left( x \\\\right) d x ,$$","figure\_list":[],"table\_list":[],"answer\_list":[[{"x":0,"y":1030},{"x":1654,"y":1030},{"x":1654,"y":1248},{"x":0,"y":1248}]],"pos\_list":[[{"x":73,"y":1030},{"x":665,"y":1030},{"x":665,"y":1142},{"x":73,"y":1142}]],"element\_list":[{"type":0,"text":"$$f \\\\left( \\\\sin ^ { 2 } x \\\\right) = \\\\frac { x } { \\\\sin x } ,$$$$\\\\frac { \\\\sqrt x } { \\\\sqrt { 1 - x } } f \\\\left( x \\\\right) d x ,$$","pos\_list":[[{"x":114,"y":1029},{"x":663,"y":1030},{"x":663,"y":1142},{"x":114,"y":1142}]],"content\_list":[{"type":2,"prob":99,"string":"$$f \\\\left( \\\\sin ^ { 2 } x \\\\right) = \\\\frac { x } { \\\\sin x } ,$$","option":"","pos":[{"x":114,"y":1045},{"x":370,"y":1045},{"x":370,"y":1128},{"x":114,"y":1127}]},{"type":2,"prob":96,"string":"$$\\\\frac { \\\\sqrt x } { \\\\sqrt { 1 - x } } f \\\\left( x \\\\right) d x ,$$","option":"","pos":[{"x":422,"y":1030},{"x":662,"y":1030},{"x":663,"y":1141},{"x":422,"y":1142}]}]}]}]},{"part\_title":"六、(本题满分7分)","pos\_list":[[{"x":76,"y":1208},{"x":1571,"y":1210},{"x":1571,"y":1467},{"x":76,"y":1468}]],"subject\_list":[{"index":0,"type":15,"num\_choices":0,"prob":0,"text":"设$$D \_ { 1 }$$是由抛物线$$y = 2 x ^ { 2 }$$和直线x=a,x=2及y=0所围成的平面区域;$$D \_ { 2 }$$是由抛物线$$y = 2 x ^ { 2 }$$和直线y=0,x=a所围成的平面区域,其中0<a<2.(1)试求$$D \_ { 1 }$$绕x轴旋转而成的旋转体体积$$V \_ { 1 } ; D \_ { 2 }$$绕y轴旋转而成的旋转体体积$$V \_ { 2 } ;$$(2)问当a为何值时,$$V \_ { 1 } + V \_ { 2 }$$取得最大值?试求此最大值.","figure\_list":[],"table\_list":[],"answer\_list":[[{"x":0,"y":1248},{"x":1654,"y":1248},{"x":1654,"y":1581},{"x":0,"y":1581}]],"pos\_list":[[{"x":66,"y":1248},{"x":1580,"y":1248},{"x":1580,"y":1467},{"x":66,"y":1467}]],"element\_list":[{"type":0,"text":"设$$D \_ { 1 }$$是由抛物线$$y = 2 x ^ { 2 }$$和直线x=a,x=2及y=0所围成的平面区域;$$D \_ { 2 }$$是由抛物线$$y = 2 x ^ { 2 }$$和直线y=0,x=a所围成的平面区域,其中0<a<2.","pos\_list":[[{"x":78,"y":1260},{"x":1571,"y":1256},{"x":1571,"y":1353},{"x":78,"y":1357}]],"content\_list":[{"type":1,"prob":99,"string":"设","option":"","pos":[{"x":78,"y":1266},{"x":124,"y":1266},{"x":124,"y":1297},{"x":78,"y":1297}]},{"type":2,"prob":99,"string":"$$D \_ { 1 }$$","option":"","pos":[{"x":124,"y":1264},{"x":159,"y":1264},{"x":159,"y":1302},{"x":124,"y":1302}]},{"type":1,"prob":99,"string":"是由抛物线","option":"","pos":[{"x":160,"y":1266},{"x":353,"y":1265},{"x":353,"y":1296},{"x":160,"y":1297}]},{"type":2,"prob":99,"string":"$$y = 2 x ^ { 2 }$$","option":"","pos":[{"x":353,"y":1260},{"x":467,"y":1259},{"x":467,"y":1299},{"x":353,"y":1300}]},{"type":1,"prob":99,"string":"和直线","option":"","pos":[{"x":467,"y":1265},{"x":583,"y":1264},{"x":584,"y":1295},{"x":467,"y":1296}]},{"type":1,"prob":99,"string":"x=a,x=2","option":"","pos":[{"x":583,"y":1263},{"x":761,"y":1261},{"x":761,"y":1301},{"x":584,"y":1302}]},{"type":1,"prob":99,"string":"及","option":"","pos":[{"x":760,"y":1264},{"x":804,"y":1264},{"x":804,"y":1295},{"x":760,"y":1295}]},{"type":1,"prob":99,"string":"y=0","option":"","pos":[{"x":804,"y":1262},{"x":881,"y":1262},{"x":881,"y":1301},{"x":804,"y":1301}]},{"type":1,"prob":99,"string":"所围成的平面区域;","option":"","pos":[{"x":881,"y":1264},{"x":1195,"y":1263},{"x":1195,"y":1294},{"x":881,"y":1295}]},{"type":2,"prob":99,"string":"$$D \_ { 2 }$$","option":"","pos":[{"x":1195,"y":1263},{"x":1235,"y":1263},{"x":1235,"y":1302},{"x":1195,"y":1302}]},{"type":1,"prob":99,"string":"是由抛物线","option":"","pos":[{"x":1235,"y":1263},{"x":1418,"y":1262},{"x":1418,"y":1293},{"x":1235,"y":1294}]},{"type":2,"prob":99,"string":"$$y = 2 x ^ { 2 }$$","option":"","pos":[{"x":1418,"y":1258},{"x":1530,"y":1257},{"x":1531,"y":1298},{"x":1418,"y":1299}]},{"type":1,"prob":99,"string":"和","option":"","pos":[{"x":1530,"y":1262},{"x":1571,"y":1262},{"x":1571,"y":1293},{"x":1530,"y":1293}]},{"type":1,"prob":99,"string":"直线","option":"","pos":[{"x":78,"y":1318},{"x":154,"y":1318},{"x":154,"y":1349},{"x":78,"y":1349}]},{"type":1,"prob":99,"string":"y=0,x=a","option":"","pos":[{"x":154,"y":1315},{"x":331,"y":1314},{"x":331,"y":1356},{"x":154,"y":1357}]},{"type":1,"prob":99,"string":"所围成的平面区域,其中","option":"","pos":[{"x":331,"y":1318},{"x":719,"y":1318},{"x":719,"y":1349},{"x":331,"y":1349}]},{"type":1,"prob":99,"string":"0<a<2.","option":"","pos":[{"x":719,"y":1314},{"x":891,"y":1315},{"x":891,"y":1354},{"x":719,"y":1354}]}]},{"type":0,"text":"(1)试求$$D \_ { 1 }$$绕x轴旋转而成的旋转体体积$$V \_ { 1 } ; D \_ { 2 }$$绕y轴旋转而成的旋转体体积$$V \_ { 2 } ;$$","pos\_list":[[{"x":78,"y":1373},{"x":1362,"y":1368},{"x":1362,"y":1411},{"x":78,"y":1416}]],"content\_list":[{"type":1,"prob":95,"string":"(1)试求","option":"","pos":[{"x":78,"y":1375},{"x":226,"y":1375},{"x":227,"y":1407},{"x":78,"y":1408}]},{"type":2,"prob":99,"string":"$$D \_ { 1 }$$","option":"","pos":[{"x":227,"y":1373},{"x":262,"y":1373},{"x":262,"y":1408},{"x":227,"y":1408}]},{"type":1,"prob":99,"string":"绕x轴旋转而成的旋转体体积","option":"","pos":[{"x":262,"y":1375},{"x":745,"y":1373},{"x":745,"y":1405},{"x":262,"y":1407}]},{"type":2,"prob":99,"string":"$$V \_ { 1 } ; D \_ { 2 }$$","option":"","pos":[{"x":745,"y":1370},{"x":836,"y":1371},{"x":836,"y":1412},{"x":745,"y":1412}]},{"type":1,"prob":99,"string":"绕y轴旋转而成的旋转体体积","option":"","pos":[{"x":836,"y":1372},{"x":1314,"y":1370},{"x":1314,"y":1403},{"x":836,"y":1405}]},{"type":2,"prob":99,"string":"$$V \_ { 2 } ;$$","option":"","pos":[{"x":1314,"y":1372},{"x":1362,"y":1372},{"x":1362,"y":1411},{"x":1314,"y":1411}]}]},{"type":0,"text":"(2)问当a为何值时,$$V \_ { 1 } + V \_ { 2 }$$取得最大值?试求此最大值.","pos\_list":[[{"x":87,"y":1426},{"x":970,"y":1425},{"x":970,"y":1467},{"x":87,"y":1468}]],"content\_list":[{"type":1,"prob":99,"string":"(2)问当","option":"","pos":[{"x":87,"y":1428},{"x":226,"y":1428},{"x":226,"y":1459},{"x":87,"y":1459}]},{"type":1,"prob":99,"string":"a","option":"","pos":[{"x":226,"y":1436},{"x":246,"y":1436},{"x":246,"y":1457},{"x":226,"y":1457}]},{"type":1,"prob":99,"string":"为何值时,","option":"","pos":[{"x":245,"y":1428},{"x":416,"y":1427},{"x":416,"y":1459},{"x":245,"y":1459}]},{"type":2,"prob":99,"string":"$$V \_ { 1 } + V \_ { 2 }$$","option":"","pos":[{"x":416,"y":1426},{"x":525,"y":1425},{"x":525,"y":1467},{"x":416,"y":1467}]},{"type":1,"prob":99,"string":"取得最大值?试求此最大值.","option":"","pos":[{"x":525,"y":1427},{"x":970,"y":1427},{"x":970,"y":1458},{"x":525,"y":1459}]}]}]}]},{"part\_title":"七、(本题满分7分)","pos\_list":[[{"x":76,"y":1535},{"x":1574,"y":1537},{"x":1574,"y":2096},{"x":76,"y":2096}]],"subject\_list":[{"index":0,"type":15,"num\_choices":0,"prob":0,"text":"(1)验证函数$$y \\\\left( x \\\\right) = 1 + \\\\frac { x ^ { 3 } } { 3 ! } + \\\\frac { x ^ { 6 } } { 6 ! } + \\\\frac { x ^ { 9 } } { 9 ! } + \\\\cdots + \\\\frac { x ^ { 3 n } } { \\\\left( 3 n \\\\right) ! } + \\\\cdots \\\\left( - \\\\infty < x < + \\\\infty \\\\right)$$)满足微分方程y\'\'+y\'+y$$= e ^ { x } ;$$","figure\_list":[],"table\_list":[],"answer\_list":[[{"x":0,"y":1581},{"x":1654,"y":1581},{"x":1654,"y":1947},{"x":0,"y":1947}]],"pos\_list":[[{"x":72,"y":1581},{"x":1578,"y":1581},{"x":1578,"y":1732},{"x":72,"y":1732}]],"element\_list":[{"type":0,"text":"(1)验证函数$$y \\\\left( x \\\\right) = 1 + \\\\frac { x ^ { 3 } } { 3 ! } + \\\\frac { x ^ { 6 } } { 6 ! } + \\\\frac { x ^ { 9 } } { 9 ! } + \\\\cdots + \\\\frac { x ^ { 3 n } } { \\\\left( 3 n \\\\right) ! } + \\\\cdots \\\\left( - \\\\infty < x < + \\\\infty \\\\right)$$)满足微分方程y\'\'+y\'+y$$= e ^ { x } ;$$","pos\_list":[[{"x":86,"y":1586},{"x":1574,"y":1579},{"x":1574,"y":1725},{"x":87,"y":1732}]],"content\_list":[{"type":1,"prob":99,"string":"(1)验证函数","option":"","pos":[{"x":86,"y":1606},{"x":290,"y":1605},{"x":290,"y":1660},{"x":87,"y":1661}]},{"type":2,"prob":98,"string":"$$y \\\\left( x \\\\right) = 1 + \\\\frac { x ^ { 3 } } { 3 ! } + \\\\frac { x ^ { 6 } } { 6 ! } + \\\\frac { x ^ { 9 } } { 9 ! } + \\\\cdots + \\\\frac { x ^ { 3 n } } { \\\\left( 3 n \\\\right) ! } + \\\\cdots \\\\left( - \\\\infty < x < + \\\\infty \\\\right)$$","option":"","pos":[{"x":290,"y":1588},{"x":1178,"y":1581},{"x":1179,"y":1671},{"x":290,"y":1678}]},{"type":1,"prob":99,"string":")满足微分方程","option":"","pos":[{"x":1177,"y":1601},{"x":1406,"y":1600},{"x":1407,"y":1655},{"x":1178,"y":1656}]},{"type":1,"prob":95,"string":"y\'\'+y\'+y","option":"","pos":[{"x":1407,"y":1610},{"x":1574,"y":1613},{"x":1573,"y":1656},{"x":1406,"y":1653}]},{"type":2,"prob":99,"string":"$$= e ^ { x } ;$$","option":"","pos":[{"x":147,"y":1691},{"x":221,"y":1691},{"x":221,"y":1732},{"x":147,"y":1732}]}]}]},{"index":1,"type":15,"num\_choices":0,"prob":0,"text":"设函数f(x),g(x)在[a,b]上连续,且g(x)>0.利用闭区间上连续函数的性质,证明存在一点ξ∈[a,b],使$$\\\\int \_ { a } ^ { b } f \\\\left( x \\\\right) g \\\\left( x \\\\right) d x = f \\\\left( \\\\xi \\\\right) \\\\int \_ { a } ^ { b } g \\\\left( x \\\\right) d x .$$","figure\_list":[],"table\_list":[],"answer\_list":[[{"x":0,"y":1947},{"x":1654,"y":1947},{"x":1654,"y":2339},{"x":0,"y":2339}]],"pos\_list":[[{"x":69,"y":1947},{"x":1579,"y":1947},{"x":1579,"y":2096},{"x":69,"y":2096}]],"element\_list":[{"type":0,"text":"设函数f(x),g(x)在[a,b]上连续,且g(x)>0.利用闭区间上连续函数的性质,证明存在一点ξ∈[a,b],使$$\\\\int \_ { a } ^ { b } f \\\\left( x \\\\right) g \\\\left( x \\\\right) d x = f \\\\left( \\\\xi \\\\right) \\\\int \_ { a } ^ { b } g \\\\left( x \\\\right) d x .$$","pos\_list":[[{"x":76,"y":1955},{"x":1571,"y":1955},{"x":1571,"y":2096},{"x":76,"y":2096}]],"content\_list":[{"type":1,"prob":99,"string":"设函数","option":"","pos":[{"x":77,"y":1961},{"x":188,"y":1961},{"x":188,"y":1992},{"x":77,"y":1993}]},{"type":1,"prob":99,"string":"f(x),g(x)","option":"","pos":[{"x":188,"y":1957},{"x":350,"y":1957},{"x":350,"y":2000},{"x":188,"y":2000}]},{"type":1,"prob":99,"string":"在","option":"","pos":[{"x":350,"y":1961},{"x":403,"y":1961},{"x":403,"y":1992},{"x":350,"y":1992}]},{"type":1,"prob":99,"string":"[a,b]","option":"","pos":[{"x":403,"y":1957},{"x":495,"y":1956},{"x":495,"y":1999},{"x":403,"y":1999}]},{"type":1,"prob":99,"string":"上连续,且","option":"","pos":[{"x":495,"y":1961},{"x":669,"y":1961},{"x":669,"y":1992},{"x":495,"y":1992}]},{"type":1,"prob":99,"string":"g(x)>0.","option":"","pos":[{"x":669,"y":1955},{"x":833,"y":1956},{"x":833,"y":1999},{"x":669,"y":1999}]},{"type":1,"prob":99,"string":"利用闭区间上连续函数的性质,证明存在一点","option":"","pos":[{"x":833,"y":1961},{"x":1571,"y":1961},{"x":1571,"y":1992},{"x":833,"y":1992}]},{"type":1,"prob":98,"string":"ξ∈[a,b],","option":"","pos":[{"x":76,"y":2023},{"x":259,"y":2023},{"x":259,"y":2076},{"x":76,"y":2075}]},{"type":1,"prob":99,"string":"使","option":"","pos":[{"x":259,"y":2015},{"x":303,"y":2015},{"x":303,"y":2090},{"x":259,"y":2090}]},{"type":2,"prob":97,"string":"$$\\\\int \_ { a } ^ { b } f \\\\left( x \\\\right) g \\\\left( x \\\\right) d x = f \\\\left( \\\\xi \\\\right) \\\\int \_ { a } ^ { b } g \\\\left( x \\\\right) d x .$$","option":"","pos":[{"x":303,"y":2009},{"x":776,"y":2008},{"x":776,"y":2095},{"x":303,"y":2096}]}]}]}]}],"prism\_version":"1.0.9","prism\_wnum":0,"width":1654}', 'RequestId': 'BD5DA3D4-17AB-5BE2-A9E2-234E1D1DECAC'}}