{'headers': {'date': 'Sun, 14 Apr 2024 10:03:04 GMT', 'content-type': 'application/json;charset=utf-8', 'content-length': '13080', 'connection': 'keep-alive', 'keep-alive': 'timeout=25', 'vary': 'Accept-Encoding', 'access-control-allow-origin': '\*', 'access-control-expose-headers': '\*', 'x-acs-request-id': '8AAE3CB0-67EC-5B7A-A84F-1D4A60B95E87', 'x-acs-trace-id': '88e7c3d83a3bf986b3dbc069185cc15e', 'etag': '1PshBR38EgNPkdFncSuWKzw2'}, 'statusCode': 200, 'body': {'Data': '{"algo\_version":"","doc\_layout":[{"layout\_type":"text","pos":[{"x":107,"y":540},{"x":107,"y":618},{"x":1276,"y":618},{"x":1276,"y":540}]},{"layout\_type":"text","pos":[{"x":139,"y":1508},{"x":139,"y":1585},{"x":1277,"y":1585},{"x":1277,"y":1508}]},{"layout\_type":"text","pos":[{"x":149,"y":1157},{"x":149,"y":1236},{"x":1277,"y":1236},{"x":1277,"y":1157}]},{"layout\_type":"text","pos":[{"x":102,"y":150},{"x":102,"y":180},{"x":350,"y":180},{"x":350,"y":150}]},{"layout\_type":"text","pos":[{"x":104,"y":1468},{"x":104,"y":1498},{"x":351,"y":1498},{"x":351,"y":1468}]},{"layout\_type":"text","pos":[{"x":104,"y":848},{"x":104,"y":882},{"x":524,"y":882},{"x":524,"y":848}]},{"layout\_type":"text","pos":[{"x":142,"y":192},{"x":142,"y":265},{"x":614,"y":265},{"x":614,"y":192}]},{"layout\_type":"text","pos":[{"x":104,"y":1113},{"x":103,"y":1145},{"x":351,"y":1145},{"x":351,"y":1113}]},{"layout\_type":"text","pos":[{"x":103,"y":497},{"x":103,"y":529},{"x":657,"y":529},{"x":657,"y":497}]}],"doc\_sptext":[{"layout\_type":"bold","pos":[{"x":106,"y":152},{"x":106,"y":180},{"x":349,"y":180},{"x":349,"y":152}]},{"layout\_type":"bold","pos":[{"x":104,"y":499},{"x":104,"y":527},{"x":657,"y":528},{"x":657,"y":499}]},{"layout\_type":"bold","pos":[{"x":109,"y":1469},{"x":109,"y":1498},{"x":350,"y":1498},{"x":350,"y":1469}]},{"layout\_type":"bold","pos":[{"x":107,"y":1116},{"x":107,"y":1144},{"x":350,"y":1144},{"x":350,"y":1116}]},{"layout\_type":"bold","pos":[{"x":1258,"y":1517},{"x":1258,"y":1536},{"x":1274,"y":1536},{"x":1274,"y":1517}]},{"layout\_type":"bold","pos":[{"x":187,"y":1517},{"x":187,"y":1539},{"x":206,"y":1539},{"x":206,"y":1517}]}],"doc\_subfield":[{"layout\_type":"single","pos":[{"x":96,"y":14},{"x":96,"y":1588},{"x":1279,"y":1588},{"x":1279,"y":14}]}],"figure":[{"type":"subject\_pattern","x":153,"y":195,"w":449,"h":68,"box":{"x":0,"y":0,"w":0,"h":0,"angle":-90},"points":[{"x":153,"y":195},{"x":602,"y":195},{"x":602,"y":263},{"x":153,"y":263}]},{"type":"subject\_question","x":0,"y":0,"w":0,"h":0,"box":{"x":696,"y":1177,"w":125,"h":1163,"angle":-90},"points":[{"x":114,"y":1114},{"x":1276,"y":1114},{"x":1276,"y":1239},{"x":114,"y":1239}]},{"type":"subject\_question","x":0,"y":0,"w":0,"h":0,"box":{"x":691,"y":1531,"w":107,"h":1176,"angle":-90},"points":[{"x":103,"y":1477},{"x":1278,"y":1477},{"x":1278,"y":1583},{"x":103,"y":1583}]},{"type":"subject\_question","x":0,"y":0,"w":0,"h":0,"box":{"x":365,"y":215,"w":97,"h":495,"angle":-90},"points":[{"x":117,"y":167},{"x":611,"y":167},{"x":611,"y":263},{"x":117,"y":263}]},{"type":"subject\_question","x":0,"y":0,"w":0,"h":0,"box":{"x":687,"y":705,"w":344,"h":1194,"angle":-89},"points":[{"x":90,"y":533},{"x":1284,"y":533},{"x":1284,"y":877},{"x":91,"y":877}]}],"height":2010,"orgHeight":2010,"orgWidth":1345,"page\_id":0,"page\_title":"","part\_info":[{"part\_title":"五、(本题满分7分)","pos\_list":[[{"x":105,"y":152},{"x":602,"y":151},{"x":602,"y":263},{"x":105,"y":263}]],"subject\_list":[{"index":0,"type":15,"num\_choices":0,"prob":0,"text":"五、(本题满分7分)","figure\_list":[[{"x":153,"y":195},{"x":602,"y":195},{"x":602,"y":263},{"x":153,"y":263}]],"table\_list":[],"answer\_list":[[{"x":0,"y":151},{"x":1345,"y":151},{"x":1345,"y":533},{"x":0,"y":533}]],"pos\_list":[[{"x":105,"y":151},{"x":611,"y":151},{"x":611,"y":263},{"x":105,"y":263}]],"element\_list":[{"type":0,"text":"五、(本题满分7分)","pos\_list":[[{"x":105,"y":152},{"x":350,"y":151},{"x":350,"y":175},{"x":105,"y":176}]],"content\_list":[{"type":1,"prob":99,"string":"五、(本题满分7分)","option":"","pos":[{"x":105,"y":152},{"x":350,"y":151},{"x":350,"y":175},{"x":105,"y":176}]}]}]}]},{"part\_title":"六、(本题共2小题,每小题5分,满分10分)","pos\_list":[[{"x":105,"y":500},{"x":1275,"y":498},{"x":1276,"y":880},{"x":105,"y":883}]],"subject\_list":[{"index":0,"type":15,"num\_choices":0,"prob":0,"text":"(1)设在[0,+∞)上函数f(x)有连续导数,且f\'(x)≥k>0,f(0)<0.证明:f(x)在(0,+∞)内有且仅有一个零点.(2)设b>a>e,,证明:$$: a ^ { b } > b ^ { a } .$$","figure\_list":[],"table\_list":[],"answer\_list":[[{"x":0,"y":533},{"x":1345,"y":533},{"x":1345,"y":1114},{"x":0,"y":1114}]],"pos\_list":[[{"x":90,"y":533},{"x":1284,"y":533},{"x":1284,"y":881},{"x":91,"y":881}]],"element\_list":[{"type":0,"text":"(1)设在[0,+∞)上函数f(x)有连续导数,且f\'(x)≥k>0,f(0)<0.证明:f(x)在(0,+∞)内有且仅有一个零点.","pos\_list":[[{"x":105,"y":537},{"x":1275,"y":535},{"x":1276,"y":613},{"x":105,"y":615}]],"content\_list":[{"type":1,"prob":99,"string":"(1)设在","option":"","pos":[{"x":105,"y":545},{"x":212,"y":544},{"x":212,"y":570},{"x":105,"y":571}]},{"type":1,"prob":99,"string":"[0,+∞)","option":"","pos":[{"x":212,"y":541},{"x":339,"y":541},{"x":339,"y":571},{"x":212,"y":572}]},{"type":1,"prob":99,"string":"上函数f(x)有连续导数,且","option":"","pos":[{"x":339,"y":544},{"x":730,"y":543},{"x":730,"y":569},{"x":339,"y":570}]},{"type":1,"prob":99,"string":"f\'(x)≥k>0,f(0)<0.","option":"","pos":[{"x":730,"y":537},{"x":1085,"y":535},{"x":1086,"y":575},{"x":730,"y":578}]},{"type":1,"prob":99,"string":"证明:f(x)在","option":"","pos":[{"x":1085,"y":542},{"x":1275,"y":542},{"x":1276,"y":568},{"x":1086,"y":568}]},{"type":1,"prob":99,"string":"(0,+∞)","option":"","pos":[{"x":156,"y":586},{"x":277,"y":585},{"x":277,"y":614},{"x":156,"y":615}]},{"type":1,"prob":99,"string":"内有且仅有一个零点.","option":"","pos":[{"x":277,"y":587},{"x":556,"y":588},{"x":556,"y":612},{"x":277,"y":611}]}]},{"type":0,"text":"(2)设b>a>e,,证明:$$: a ^ { b } > b ^ { a } .$$","pos\_list":[[{"x":105,"y":848},{"x":523,"y":845},{"x":524,"y":880},{"x":105,"y":883}]],"content\_list":[{"type":1,"prob":99,"string":"(2)设","option":"","pos":[{"x":105,"y":853},{"x":188,"y":852},{"x":188,"y":877},{"x":105,"y":878}]},{"type":1,"prob":99,"string":"b>a>e,","option":"","pos":[{"x":188,"y":848},{"x":334,"y":847},{"x":335,"y":880},{"x":188,"y":881}]},{"type":1,"prob":86,"string":",证明:","option":"","pos":[{"x":335,"y":851},{"x":405,"y":850},{"x":405,"y":876},{"x":335,"y":876}]},{"type":2,"prob":99,"string":"$$: a ^ { b } > b ^ { a } .$$","option":"","pos":[{"x":405,"y":847},{"x":523,"y":846},{"x":524,"y":880},{"x":405,"y":881}]}]}]}]},{"part\_title":"七、(本题满分8分)","pos\_list":[[{"x":106,"y":1116},{"x":1276,"y":1116},{"x":1277,"y":1578},{"x":106,"y":1581}]],"subject\_list":[{"index":0,"type":15,"num\_choices":0,"prob":0,"text":"七、(本题满分8分)已知二次型$$f \\\\left( x \_ { 1 } , x \_ { 2 } , x \_ { 3 } \\\\right) = 2 x \_ { 1 } ^ { 2 } + 3 x \_ { 2 } ^ { 2 } + 3 x \_ { 3 } ^ { 2 } + 2 a x \_ { 2 } x \_ { 3 } \\\\left( a > 0 \\\\right)$$,通过正交变换化为标准形$$f = y \_ { 1 } ^ { 2 } + 2 y \_ { 2 } ^ { 2 } + 5 y \_ { 3 } ^ { 2 } ,$$,求参数a及所用的正交变换矩阵.","figure\_list":[],"table\_list":[],"answer\_list":[[{"x":0,"y":1114},{"x":1345,"y":1114},{"x":1345,"y":1470},{"x":0,"y":1470}]],"pos\_list":[[{"x":107,"y":1114},{"x":1276,"y":1114},{"x":1276,"y":1239},{"x":107,"y":1239}]],"element\_list":[{"type":0,"text":"七、(本题满分8分)","pos\_list":[[{"x":107,"y":1116},{"x":349,"y":1116},{"x":349,"y":1141},{"x":107,"y":1141}]],"content\_list":[{"type":1,"prob":99,"string":"七、(本题满分8分)","option":"","pos":[{"x":107,"y":1116},{"x":349,"y":1116},{"x":349,"y":1141},{"x":107,"y":1141}]}]},{"type":0,"text":"已知二次型$$f \\\\left( x \_ { 1 } , x \_ { 2 } , x \_ { 3 } \\\\right) = 2 x \_ { 1 } ^ { 2 } + 3 x \_ { 2 } ^ { 2 } + 3 x \_ { 3 } ^ { 2 } + 2 a x \_ { 2 } x \_ { 3 } \\\\left( a > 0 \\\\right)$$,通过正交变换化为标准形$$f = y \_ { 1 } ^ { 2 } + 2 y \_ { 2 } ^ { 2 } + 5 y \_ { 3 } ^ { 2 } ,$$,求参数a及所用的正交变换矩阵.","pos\_list":[[{"x":149,"y":1156},{"x":1275,"y":1155},{"x":1275,"y":1238},{"x":149,"y":1239}]],"content\_list":[{"type":1,"prob":99,"string":"已知二次型","option":"","pos":[{"x":152,"y":1161},{"x":301,"y":1160},{"x":301,"y":1186},{"x":153,"y":1186}]},{"type":2,"prob":99,"string":"$$f \\\\left( x \_ { 1 } , x \_ { 2 } , x \_ { 3 } \\\\right) = 2 x \_ { 1 } ^ { 2 } + 3 x \_ { 2 } ^ { 2 } + 3 x \_ { 3 } ^ { 2 } + 2 a x \_ { 2 } x \_ { 3 } \\\\left( a > 0 \\\\right)$$","option":"","pos":[{"x":301,"y":1156},{"x":977,"y":1155},{"x":977,"y":1192},{"x":301,"y":1192}]},{"type":1,"prob":99,"string":",通过正交变换化为标准","option":"","pos":[{"x":977,"y":1160},{"x":1275,"y":1160},{"x":1275,"y":1185},{"x":977,"y":1185}]},{"type":1,"prob":99,"string":"形","option":"","pos":[{"x":149,"y":1209},{"x":185,"y":1209},{"x":185,"y":1234},{"x":149,"y":1234}]},{"type":2,"prob":99,"string":"$$f = y \_ { 1 } ^ { 2 } + 2 y \_ { 2 } ^ { 2 } + 5 y \_ { 3 } ^ { 2 } ,$$","option":"","pos":[{"x":185,"y":1202},{"x":444,"y":1200},{"x":445,"y":1237},{"x":185,"y":1239}]},{"type":1,"prob":99,"string":",求参数","option":"","pos":[{"x":444,"y":1207},{"x":543,"y":1206},{"x":543,"y":1231},{"x":444,"y":1232}]},{"type":1,"prob":99,"string":"a","option":"","pos":[{"x":543,"y":1213},{"x":559,"y":1213},{"x":559,"y":1230},{"x":543,"y":1230}]},{"type":1,"prob":99,"string":"及所用的正交变换矩阵.","option":"","pos":[{"x":559,"y":1206},{"x":870,"y":1204},{"x":871,"y":1229},{"x":559,"y":1231}]}]}]},{"index":1,"type":15,"num\_choices":0,"prob":0,"text":"八 、(本题满分6分)设A是n×m矩阵,B是m×n矩阵,其中n<m,E是n阶单位矩阵,若AB=E,证明B的列向量组线性无关.","figure\_list":[],"table\_list":[],"answer\_list":[[{"x":0,"y":1470},{"x":1345,"y":1470},{"x":1345,"y":2010},{"x":0,"y":2010}]],"pos\_list":[[{"x":103,"y":1470},{"x":1278,"y":1470},{"x":1278,"y":1583},{"x":103,"y":1583}]],"element\_list":[{"type":0,"text":"八 、(本题满分6分)","pos\_list":[[{"x":106,"y":1470},{"x":349,"y":1470},{"x":349,"y":1494},{"x":106,"y":1494}]],"content\_list":[{"type":1,"prob":99,"string":"八、(本题满分6分)","option":"","pos":[{"x":106,"y":1470},{"x":349,"y":1470},{"x":349,"y":1494},{"x":106,"y":1494}]}]},{"type":0,"text":"设A是n×m矩阵,B是m×n矩阵,其中n<m,E是n阶单位矩阵,若AB=E,证明B的列向量组线性无关.","pos\_list":[[{"x":150,"y":1513},{"x":1276,"y":1510},{"x":1277,"y":1578},{"x":151,"y":1581}]],"content\_list":[{"type":1,"prob":99,"string":"设A是n×m矩阵,B是","option":"","pos":[{"x":150,"y":1518},{"x":468,"y":1515},{"x":468,"y":1540},{"x":151,"y":1542}]},{"type":1,"prob":99,"string":"m×n","option":"","pos":[{"x":468,"y":1514},{"x":546,"y":1514},{"x":546,"y":1539},{"x":468,"y":1539}]},{"type":1,"prob":99,"string":"矩阵,其中n<m,E是n阶单位矩阵,若","option":"","pos":[{"x":546,"y":1515},{"x":1079,"y":1511},{"x":1080,"y":1535},{"x":546,"y":1539}]},{"type":1,"prob":99,"string":"AB=E,","option":"","pos":[{"x":1079,"y":1511},{"x":1188,"y":1511},{"x":1188,"y":1540},{"x":1079,"y":1540}]},{"type":1,"prob":99,"string":"证明B","option":"","pos":[{"x":1188,"y":1510},{"x":1276,"y":1510},{"x":1276,"y":1534},{"x":1188,"y":1534}]},{"type":1,"prob":99,"string":"的列向量组线性无关.","option":"","pos":[{"x":153,"y":1557},{"x":420,"y":1556},{"x":420,"y":1580},{"x":153,"y":1581}]}]}]}]}],"prism\_version":"1.0.9","prism\_wnum":0,"width":1345}', 'RequestId': '8AAE3CB0-67EC-5B7A-A84F-1D4A60B95E87'}}