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2 } \\\\left( n = 2 , 3 , \\\\cdots$$(I)证明数列 );(Ⅱ)求$$\\\\lim \_ { n \\\\to \\\\infty } \\\\frac { a \_ { n } } { a \_ { n - 1 } } .$$","figure\_list":[],"table\_list":[],"answer\_list":[[{"x":0,"y":403},{"x":1654,"y":403},{"x":1654,"y":1095},{"x":0,"y":1095}]],"pos\_list":[[{"x":55,"y":403},{"x":1202,"y":403},{"x":1202,"y":775},{"x":55,"y":775}]],"element\_list":[{"type":0,"text":"(18)(本题满分10分)","pos\_list":[[{"x":64,"y":422},{"x":410,"y":421},{"x":410,"y":456},{"x":64,"y":456}]],"content\_list":[{"type":1,"prob":99,"string":"(18)(本题满分10分)","option":"","pos":[{"x":64,"y":422},{"x":410,"y":421},{"x":410,"y":456},{"x":64,"y":456}]}]},{"type":0,"text":"设$$a \_ { n } = \\\\int \_ { 0 } ^ { 1 } x ^ { n } \\\\sqrt { 1 - x ^ { 2 } d } \\\\left( x = 0 , 1 , 2 , \\\\cdots \\\\right) 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\_ { 3 } = \\\\left( 1 , a , 3 \\\\right) ^ { 1 }$$为$$R ^ { 3 }$$的一个基,$$\\\\beta = \\\\left( 1 , 1 , 1 \\\\right) ^ { T }$$在这个基下的坐标为$$\\\\left( b , c , 1 \\\\right) ^ { T } .$$(I)求a,b,c;(Ⅱ)证明$$\\\\alpha \_ { 2 } , \\\\alpha \_ { 3 } , \\\\beta$$为$$R ^ { 3 }$$的一个基,并求$$\\\\alpha \_ { 2 } , \\\\alpha \_ { 3 } , \\\\beta$$到$$\\\\alpha \_ { 1 } , \\\\alpha \_ { 2 } , \\\\alpha \_ { 3 }$$的过渡矩阵.","figure\_list":[],"table\_list":[],"answer\_list":[[{"x":0,"y":1592},{"x":1654,"y":1592},{"x":1654,"y":2339},{"x":0,"y":2339}]],"pos\_list":[[{"x":50,"y":1592},{"x":1613,"y":1592},{"x":1613,"y":1883},{"x":50,"y":1883}]],"element\_list":[{"type":0,"text":"(20)(本题满分11分)","pos\_list":[[{"x":54,"y":1605},{"x":419,"y":1606},{"x":419,"y":1637},{"x":54,"y":1637}]],"content\_list":[{"type":1,"prob":99,"string":"(20)(本题满分11分)","option":"","pos":[{"x":54,"y":1605},{"x":419,"y":1606},{"x":419,"y":1637},{"x":54,"y":1637}]}]},{"type":0,"text":"设向量组$$\\\\alpha \_ { 1 } = \\\\left( 1 , 2 , 1 \\\\right) ^ { T } , 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