Formante A

formanteAMau = [433,504,64,41,36,37,42,48,125,493,453,245,151,171,74,63,52,46,41,41,48,62,320,531,523,173,55,46,44,44,46,53,56,87,335,373,370,227,71,49,46,46,49,55,73,86,70,59,50,46,43,42,42,42,42,43,41,42,43,219,648,518,548,57,39,36,37,43,50,315,606,519,278,205,210,86,71,53,46,40,40,47,65,422,623,546,143,52,44,41,42,44,50,55,106,259,332,320,174,65,48,45,44,46,53,63,76,66,56,48,44,41,41,41,42,42,41,40,40,45,502,590,556,380,44,37,36,39,47,61,567,586,488,235,245,195,91,68,50,44,39,42,50,126,572,639,474,72,49,43,41,42,46,52,70,171,292,333,226,77,56,47,45,45,48,54,65,67,60,49,45,42,40,41,42,41,41,40,40,45,538,591,640,381,44,37,36,39,47,66,640,634,516,228,247,153,80,62,50,43,39,41,48,100,550,661,476,70,48,42,40,41,44,51,72,102,216,232,128,71,57,47,45,43,47,49,57,61,56,47,44,41,40,40,41,41,40,39,38,57,633,577,707,82,39,36,37,41,46,243,709,620,394,219,250,92,86,59,47,40,38,42,47,211,634,663,314,58,45,40,39,40,47,55,63,90,99,90,72,71,53,46,43,43,44,48,53,55,49,44,41,39,39,40,40,40,39,38,47,485,498,698,269,42,36,36,39,44,73,685,630,482,262,264,103,75,63,49,41,38,41,46,88,558,677,444,71,48,42,39,40,45,59,64,109,132,93,71,73,58,49,44,44,44,47,53,56,50,45,42,40,40,40,41,40,38,39,46,470,540,713,311,42,36,36,39,43,71,682,621,494,272,266,113,82,67,50,42,38,40,45,77,550,680,476,80,50,41,39,40,46,56,62,91,93,77,75,76,60,48,44,43,43,46,52,52,49,44,41,39,39,39,41,40,38,40,111,458,605,636,59,39,36,37,40,43,245,629,583,384,296,197,76,74,58,47,40,40,43,50,245,629,630,283,64,47,41,40,43,53,60,81,135,94,78,86,78,55,47,45,44,45,49,54,51,47,44,42,40,40,40,40,39,39,54,522,471,735,170,42,36,37,39,41,64,599,596,477,331,321,110,84,67,51,42,39,42,45,84,524,682,443,88,52,42,39,41,48,56,67,124,117,80,81,86,60,49,46,44,43,47,52,53,49,45,42,40,39,40,40,39,39,43,387,490,710,473,46,37,36,38,41,48,454,621,569,385,335,155,76,67,53,44,39,40,43,56,370,663,582,208,59,45,40,40,45,52,62,95,136,86,87,88,70,51,47,44,43,45,50,54,51,46,43,40,39,40,40,40,39,41,114,515,611,666,57,39,36,37,41,43,236,631,615,471,324,221,71,71,56,47,40,40,43,48,201,585,653,352,75,48,41,40,44,50,60,81,161,94,88,82,79,54,48,45,44,45,48,53,51,48,44,41,40,40,40,40,39,39,62,474,561,707,118,41,36,37,39,41,69,602,605,491,354,274,89,73,62,50,41,39,42,45,78,500,663,458,108,53,42,39,42,47,55,69,141,105,82,81,87,59,50,46,43,43,46,51,51,49,45,42,40,39,40,40,39,39,52,476,497,727,255,43,36,36,39,40,54,536,591,548,384,341,126,77,66,51,43,39,42,44,63,433,671,539,177,59,44,40,41,46,53,66,123,138,89,94,92,64,50,47,44,43,46,50,51,50,45,43,41,40,40,40,39,40,47,503,446,718,332,45,37,36,38,41,50,441,574,551,385,345,143,79,68,53,44,40,42,44,59,370,647,571,228,64,46,40,41,46,55,70,164,191,98,94,87,67,51,48,44,44,45,50,52,50,46,43,41,39,40,39,39,40,70,565,534,700,113,41,36,36,39,41,59,489,542,509,385,355,115,83,62,49,42,39,42,45,75,461,657,489,159,58,44,40,41,47,54,70,174,185,122,107,93,61,49,47,44,43,46,50,51,49,46,43,41,39,40,40,39,40,77,517,540,692,136,42,36,36,39,40,58,449,529,487,372,316,92,73,60,50,42,40,42,46,70,422,641,491,176,60,45,41,42,47,60,78,247,242,150,95,82,60,50,47,45,45,46,51,51,49,45,43,41,40,40,40,40,41,223,519,607,645,65,40,36,37,40,41,79,456,529,431,366,285,78,74,58,48,41,40,43,46,96,482,645,403,132,56,43,41,43,49,57,80,220,165,125,111,97,58,50,47,45,44,47,51,50,48,45,42,40,39,40,39,39,43,402,501,674,544,52,38,36,37,40,42,160,477,524,429,414,250,78,72,55,46,40,41,42,48,162,570,629,361,105,52,42,40,45,49,57,93,210,123,128,115,85,55,49,46,44,44,48,50,50,47,45,41,40,40,40,39,39,48,549,445,722,344,46,37,36,38,40,46,310,485,519,414,418,188,89,70,54,44,40,42,43,54,274,622,592,302,80,49,41,41,46,52,63,127,193,108,117,107,77,54,50,45,44,44,48,50,49,46,44,41,40,40,40,39,40,50,487,455,708,333,46,37,36,38,40,47,322,484,522,390,361,153,79,69,53,45,40,42,43,53,264,597,588,303,81,49,42,41,45,53,65,136,202,120,108,100,75,55,49,46,45,45,48,51,49,46,43,41,40,40,40,39,40,48,561,452,731,299,45,37,36,38,41,48,386,518,563,388,375,176,91,72,53,45,40,42,43,55,281,617,605,308,85,49,42,42,46,52,62,94,155,97,125,111,85,54,50,45,44,45,48,50,49,47,43,41,40,40,40,40,40,56,547,426,709,272,45,37,36,38,40,48,357,494,501,375,377,150,79,67,53,44,40,42,43,55,282,615,575,281,88,48,42,43,48,53,65,96,118,83,106,111,76,55,51,45,44,44,48,49,48,45,43,41,39,39,39,40,41,276,545,609,606,60,40,36,37,40,42,83,431,507,421,353,333,105,91,61,50,41,40,43,46,94,465,660,436,170,60,44,42,45,50,58,70,109,91,90,114,121,65,54,48,44,44,46,48,48,47,45,42,41,40,40,39,40,47,542,434,705,358,47,38,36,38,40,45,283,440,500,324,372,205,102,79,57,47,40,42,43,52,215,580,613,320,136,53,43,43,47,53,63,90,161,92,107,115,87,56,52,46,44,44,46,48,47,46,44,42,40,41,40,40,42,337,517,608,554,55,40,36,37,40,42,89,340,418,319,285,245,82,80,59,48,41,41,42,47,104,453,619,385,154,61,45,43,46,52,63,82,158,119,95,101,93,61,53,48,45,44,45,48,47,46,44,42,40,40,39,40,43,442,554,637,512,51,39,36,37,41,44,148,380,468,330,330,295,128,107,61,49,40,41,43,49,160,527,650,377,125,58,44,43,45,52,62,78,151,121,98,95,89,59,52,47,45,44,45,48,47,45,44,42,40,40,40,40,44,470,503,639,441,51,39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[576,76,70,53,53,42,40,39,37,38,39,42,40,43,58,68,127,87,344,177,150,63,58,47,43,41,41,41,41,43,47,52,58,84,140,152,162,158,86,60,52,48,44,41,39,38,38,37,37,38,39,38,84,355,52,68,587,660,70,63,51,52,43,39,39,36,38,39,41,41,41,60,64,156,86,317,319,145,93,56,54,43,44,43,42,41,43,48,51,53,66,86,138,108,168,88,62,55,52,44,41,40,39,37,37,38,37,37,40,364,156,49,164,761,476,57,58,51,52,41,38,37,37,38,39,40,39,42,60,61,137,89,424,317,224,116,65,56,47,48,43,41,42,45,46,46,51,60,69,80,87,104,75,63,55,49,44,41,39,38,37,37,37,37,43,282,69,51,329,767,482,71,71,66,64,44,40,38,36,38,38,38,37,41,49,54,70,74,354,307,290,181,112,64,52,49,45,43,42,43,43,44,46,51,55,60,72,81,68,59,56,50,43,40,39,38,37,37,37,41,148,68,49,89,758,603,125,75,83,150,54,43,40,37,38,38,38,37,39,45,50,55,57,170,316,280,238,172,99,56,54,50,44,42,43,44,44,44,48,51,56,59,71,66,62,58,54,47,43,40,39,38,37,37,37,41,61,55,52,98,584,620,299,163,112,158,58,46,41,39,39,38,39,38,40,45,49,61,65,147,263,278,273,141,85,56,53,48,44,43,42,43,44,46,49,53,62,73,81,72,66,59,55,49,44,41,40,39,38,37,37,38,42,63,66,53,99,642,578,194,75,86,77,50,42,39,39,38,39,38,39,41,46,55,61,74,173,284,204,124,85,62,52,48,45,42,42,42,43,44,46,51,58,64,78,102,90,68,60,53,48,44,41,40,39,38,38,38,38,38,40,45,73,80,60,131,461,449,75,54,53,51,43,39,38,38,39,40,40,42,45,56,74,97,100,159,214,115,65,55,51,46,43,43,42,42,43,45,47,51,59,69,83,93,98,85,63,53,49,46,43,41,40,40,39,39,39,40,40,41,43,48,67,104,61,65,107,144,61,49,46,45,43,40,40,39,40,42,44,46,48,57,72,84,79,73,77,60,52,49,46,44,43,43,43,43,45,48,51,54,61,69,71,73,70,64,56,52,49,47,45,43,43,42,41,41,42,41,42,43,43,43,44,44,46,62,57,47,49,60,61,49,46,45,47,45,43,43,42,44,45,46,47,48,52,53,56,54,53,53,51,49,47,47,46,45,45,45,47,47,48,49,52,54,55,56,56,56,54,53,51,50,49,48,46,46,46,45,44,44,44,44,43,43,43,43,43,42,42,42,43,51,52,47,47,55,62,54,48,47,50,48,46,44,43,43,44,44,45,45,47,49,52,51,51,53,53,53,50,49,48,48,47,46,46,46,47,47,48,49,50,51,52,53,54,54,52,51,51,50,48,47,46,47,46,45,45,45,45,45,44,44,44,44,44,43,43,43,43,43,45,49,48,48,49,53,53,52,49,48,49,47,47,46,45,45,45,45,45,46,47,48,49,49,50,51,51,51,50,49,48,48,47,47,47,47,47,47,48,48,49,49,50,50,51,51,50,50,49,49,48,48,47,47,47,46,46,46,46,46,46,46,45,45,45,45,44,44,44,44,44,44,44,46,46,46,47,48,49,49,49,49,49,48,48,47,46,46,46,46,46,46,46,46,47,47,48,48,48,48,49,49,48,47,48,48,48,47,47,48,48,47,47,48,48,48,48,49,48,48,49,48,48,47,48,47,47,46,47,47,46,46,46,46,46,46,46,46,46,45,46,46,45,45,45,45,45,45,45,46,46,46,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,46,46,47,47,46,47,47,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,47,47,47,46,47,47,47,47,47,47,46,47,47,47,46,47,46,47,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,47,46,47,46,46,47,46,47,46,47,47,47,47,47,47,47,47,47,46,46,47,46,46,46,46,46,46,46,46,47,47,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,45,45,45,45,45,46,45,46,46,45,46,46,45,46,46,45,46,45,45,46,46,45,46,45,45,46,45,45,45,45,45,46,45,45,45,45,45,45,45,45,45,45,45,45,45,46,45,45,46,46,45,46,46,45,46,46,45,46,45,45,46,45,45,45,45,45,46,45,46,46,45,46,46,45,45,46,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,44,45,44,44,44,45,44,44,44,44,44,44,44,44,45,44,45,44,44,45,44,44,44,44,44,45,44,45,45,44,44,45,44,44,45,44,45,44,44,45,45,44,44,45,44,45,44,44,44,45,44,45,45,45,45,44,44,44,44,44,44,44,44,44,44,44,44,44,44,45,44,44,44,44,44,44,44,44,44,44,44,44,44,44,45,44,45,45,45,44,44,45,45,44,44,45,44,44,44,44,44,44,44,44,45,44,44,45,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,43,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,43,44,44,43,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,43,44,44,44,44,44,44,44,44,43,44,44,44,44,44,44,44,44,43,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,43,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,43,44,44,44,44,44,43,44,44,44,44,44,44,44,44,43,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,43,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,43,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,43,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,43,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,43,43,44,44,44,44,44,4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[229,543,342,677,282,77,108,57,56,43,42,41,40,38,38,39,41,40,42,45,53,58,65,192,352,349,242,227,148,82,56,49,45,42,39,38,37,37,37,39,44,37,41,58,56,65,57,569,505,298,529,349,674,114,73,64,51,50,41,40,40,39,37,38,40,40,41,44,48,57,66,131,266,310,309,199,117,79,56,48,44,41,39,38,37,36,37,40,43,37,41,58,59,58,61,612,532,373,489,478,658,106,78,63,52,49,40,40,39,39,38,37,39,42,42,43,48,67,90,89,212,324,255,133,76,62,53,45,42,40,38,37,37,38,42,41,37,43,56,57,52,71,656,471,460,403,624,612,82,82,58,57,49,41,40,40,40,38,38,40,41,41,43,47,55,57,65,88,113,106,68,55,51,47,42,39,39,37,37,39,41,37,38,43,47,46,46,67,215,245,310,427,597,451,239,199,100,87,56,45,47,46,42,40,42,44,43,43,46,51,57,57,64,81,77,76,60,52,50,45,42,40,39,37,39,41,37,38,46,46,44,45,63,109,74,88,231,534,317,139,197,171,130,53,48,56,48,44,44,46,47,45,46,49,55,55,57,60,62,63,56,52,49,48,45,41,40,39,39,46,38,38,47,49,47,44,56,149,74,80,73,404,396,93,155,86,184,62,47,52,54,47,44,46,51,48,47,51,56,63,59,65,71,69,62,55,52,50,47,43,41,40,39,40,44,38,39,47,50,47,44,63,158,144,98,148,478,377,149,104,84,142,57,47,49,50,46,43,44,49,48,47,49,59,62,62,69,87,115,81,66,56,54,48,44,41,40,39,37,41,43,37,39,48,51,47,46,104,259,211,174,226,631,255,178,88,82,160,51,46,48,48,46,42,43,47,46,47,49,61,65,76,133,183,254,149,79,66,60,52,46,43,41,39,37,37,43,40,37,42,48,51,46,50,143,248,283,132,348,582,233,225,67,107,105,48,46,47,47,44,41,43,46,46,46,48,59,61,65,69,139,197,87,69,67,59,52,47,43,42,40,38,37,40,41,37,40,44,47,47,46,66,122,205,148,197,502,309,196,87,74,114,54,46,46,46,44,41,42,43,44,45,46,51,57,60,65,88,170,123,83,77,69,56,50,46,43,42,40,38,37,39,41,38,38,43,46,46,46,56,114,173,151,143,424,389,164,93,70,86,57,47,45,44,44,42,40,42,43,43,44,48,53,59,65,80,199,269,176,141,112,81,61,51,48,45,42,40,39,38,37,37,38,41,39,39,45,50,51,49,71,300,314,221,205,474,347,131,73,59,64,50,44,44,44,42,40,40,42,43,42,43,49,57,56,64,100,299,341,208,235,252,159,70,60,55,50,46,43,41,41,39,38,38,38,37,40,44,39,42,51,58,59,53,148,377,412,168,157,396,154,84,54,50,53,45,42,41,41,42,40,39,41,44,44,43,47,56,64,66,71,204,338,228,135,157,125,71,54,51,49,46,43,42,42,40,39,38,39,39,38,38,39,45,44,40,45,59,68,54,54,92,305,163,60,72,125,66,54,46,47,48,43,41,41,42,42,41,40,42,45,47,45,49,57,63,62,63,85,167,118,72,78,76,60,53,50,49,47,44,43,43,43,42,41,40,41,41,40,40,40,43,47,43,44,52,60,54,51,62,88,83,56,60,66,58,51,47,46,47,44,42,42,42,43,42,42,43,45,46,48,48,51,56,57,57,61,64,63,60,57,58,55,52,50,50,48,47,45,45,44,44,43,43,42,42,42,42,42,41,41,42,46,45,43,45,51,53,49,48,53,58,53,49,50,52,50,47,45,46,46,44,43,43,44,44,43,43,44,46,46,47,48,50,52,52,52,54,55,54,53,52,53,51,49,49,48,47,47,46,46,45,45,45,44,44,44,44,43,43,44,43,43,43,44,45,44,44,47,48,48,47,49,51,51,49,50,51,51,49,48,48,48,47,46,45,46,46,45,45,45,46,47,46,47,48,49,49,50,50,51,52,51,51,52,52,51,50,50,50,49,48,48,47,46,46,46,45,45,44,44,44,43,44,44,43,43,43,43,44,44,45,45,46,46,47,47,48,48,48,48,48,48,48,47,47,47,47,46,46,46,46,45,46,46,46,46,46,47,47,48,48,48,49,49,48,48,48,48,48,48,48,48,48,48,47,47,47,47,46,46,46,46,46,45,45,45,45,45,44,44,44,44,45,44,44,45,45,45,45,45,46,46,46,46,47,47,46,46,46,46,46,46,46,46,46,47,47,46,47,47,48,48,48,48,49,49,49,49,49,49,48,48,48,48,47,47,47,47,47,47,46,46,46,46,46,46,45,46,45,45,45,45,45,45,45,45,45,45,44,45,45,45,45,45,45,45,45,45,46,46,46,46,46,46,47,46,46,46,46,47,46,46,46,46,46,46,46,46,47,47,46,47,47,47,47,46,46,47,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,45,46,45,45,46,45,45,45,45,45,45,45,45,45,45,45,46,45,45,45,45,46,46,45,46,46,45,45,45,45,46,45,45,46,45,45,46,45,45,46,46,46,46,46,46,46,46,46,46,46,46,46,45,45,46,45,46,46,45,46,45,45,46,45,45,46,46,45,46,45,45,46,45,46,46,46,45,46,45,45,46,45,46,46,46,46,46,46,46,46,46,46,46,46,46,46,45,46,45,45,46,45,46,46,45,46,46,45,46,46,45,46,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,44,44,44,44,45,45,44,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,44,45,45,44,44,45,44,44,45,44,45,45,45,45,45,45,45,45,45,45,45,45,45,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,45,45,45,45,45,45,45,45,45,45,45,44,45,45,44,44,44,44,44,45,44,45,44,44,44,44,44,45,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,45,45,45,45,45,45,45,45,45,45,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,43,44,44,43,44,44,43,44,44,43,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,43,44,44,44,43,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,44,43,44,43,43,44,43,44,44,44,44,44,44,44,44,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[538,466,316,142,58,48,42,39,37,37,37,37,38,39,41,43,47,54,70,148,319,411,503,519,472,438,320,233,88,64,51,46,42,40,39,38,38,38,40,42,46,54,82,280,481,583,550,468,324,117,57,46,41,38,37,37,37,37,38,39,40,43,48,56,85,211,394,553,549,602,516,466,360,221,91,57,49,44,41,39,38,37,37,39,39,41,44,51,71,255,473,609,601,530,395,224,67,49,42,39,37,37,37,37,37,38,39,41,43,50,59,128,384,528,669,592,613,553,418,320,114,64,49,44,40,38,37,37,37,38,38,40,42,46,53,88,315,546,648,619,568,425,248,74,50,42,38,37,36,37,37,37,38,39,40,43,46,59,94,361,582,656,669,596,599,504,331,188,62,51,43,40,37,37,37,37,38,38,39,41,44,52,66,239,519,634,661,602,541,381,183,63,47,41,37,37,37,37,37,37,38,38,40,42,45,55,80,365,627,681,706,628,590,511,339,149,58,47,41,38,37,37,37,37,38,38,39,42,45,52,70,196,518,623,671,620,575,454,259,77,49,42,38,37,36,37,37,37,38,38,39,41,44,47,65,131,511,668,700,694,599,579,486,264,90,52,44,40,37,37,37,37,38,37,39,40,43,47,57,105,299,610,645,660,612,543,424,182,65,47,41,37,37,36,37,37,37,37,38,38,41,43,47,63,105,496,656,705,689,608,581,469,234,80,49,43,38,36,37,36,37,37,38,39,41,43,47,57,95,303,579,657,663,622,553,449,209,68,48,41,37,36,37,37,37,37,37,38,38,40,41,44,49,71,312,623,691,702,636,565,545,308,84,52,42,39,37,37,37,36,38,38,39,41,42,46,52,72,187,477,637,674,641,576,536,357,126,58,45,39,37,37,37,37,38,37,38,38,39,41,42,44,50,86,387,655,695,681,630,548,513,270,74,49,41,38,37,37,37,37,38,38,39,42,43,48,53,74,203,465,640,664,643,581,531,353,123,56,44,39,37,37,37,37,37,37,38,39,39,40,41,44,47,69,223,579,693,682,671,559,509,282,68,49,40,38,36,37,37,37,38,39,40,42,43,47,52,63,119,333,558,661,656,612,583,410,168,62,45,40,37,37,37,37,37,38,38,39,39,39,40,41,43,48,68,257,629,694,712,636,520,429,132,55,43,38,37,37,37,38,37,39,40,41,45,45,48,53,58,92,283,516,685,648,627,569,393,152,55,44,39,36,37,37,37,38,38,39,41,40,40,40,41,41,43,49,72,423,680,703,673,579,402,209,57,44,38,36,37,37,37,38,39,41,42,44,47,45,47,48,53,68,183,503,670,675,634,554,350,83,48,41,37,37,37,37,38,38,40,42,43,42,41,40,38,39,39,40,48,75,526,720,672,642,486,208,62,43,39,36,37,37,37,39,40,41,46,46,45,45,42,42,43,45,53,122,440,694,673,613,468,203,57,43,38,36,37,37,38,39,41,44,45,46,43,40,39,37,37,38,41,46,113,478,700,687,620,529,189,55,43,38,37,37,37,38,39,43,43,45,44,42,40,39,37,38,39,43,56,159,584,654,631,505,252,66,45,39,37,37,37,38,39,42,44,45,45,43,39,37,37,37,37,38,41,51,96,596,685,667,574,395,215,60,46,42,39,39,39,40,41,43,43,41,40,38,37,37,38,38,40,44,57,198,475,595,584,480,296,87,55,46,43,40,40,41,41,42,44,43,42,40,39,37,37,37,37,38,39,40,45,49,55,72,107,170,154,128,96,96,71,64,62,59,55,51,49,46,43,42,40,41,40,40,41,44,46,51,57,69,103,124,162,183,164,132,113,91,70,61,56,52,50,47,45,45,44,44,44,44,44,44,44,43,43,42,41,41,41,42,43,44,50,54,76,95,128,136,100,73,58,53,49,47,45,45,45,45,45,44,45,44,43,43,42,44,45,47,52,62,78,118,168,151,111,78,64,56,51,49,48,48,48,47,49,48,48,47,45,45,44,43,43,43,43,44,44,44,43,43,42,43,43,44,47,51,57,65,72,85,74,63,57,53,49,47,46,46,45,46,45,47,45,44,44,44,44,44,45,47,52,56,65,75,85,80,70,63,56,52,50,49,49,48,49,50,50,49,49,48,47,46,45,45,46,46,47,47,47,47,46,44,43,42,41,42,42,43,45,49,52,57,61,61,61,57,54,52,51,50,50,50,50,50,49,48,46,44,43,43,43,43,45,47,50,54,59,62,65,63,60,57,55,53,53,52,52,53,52,52,51,49,48,47,46,46,46,46,48,48,50,50,50,50,49,47,46,45,44,44,44,44,44,45,45,46,46,47,47,48,49,50,52,53,55,56,56,55,55,52,51,49,48,47,47,47,46,48,47,48,48,49,49,49,49,50,51,52,53,54,55,55,54,53,52,51,50,49,48,49,48,49,49,49,49,50,49,49,49,48,49,48,48,49,49,48,48,48,47,47,46,45,45,45,45,46,46,46,47,48,48,49,49,49,50,50,50,50,51,50,51,50,50,50,49,49,48,48,48,48,48,48,49,49,50,50,51,51,52,52,52,52,52,52,51,52,51,51,51,51,51,50,50,50,50,49,49,49,49,49,49,50,50,50,50,50,51,50,49,50,49,49,49,49,49,49,48,48,48,48,47,47,48,47,48,48,49,48,49,49,49,49,49,50,49,50,50,50,51,51,51,52,51,51,51,51,51,50,50,50,51,50,50,51,50,50,50,51,50,51,51,51,51,51,52,53,53,53,54,54,55,54,53,53,52,52,51,51,51,51,51,51,51,51,51,52,51,51,51,51,51,51,52,51,52,51,51,51,51,51,50,50,50,50,49,50,50,50,50,50,50,50,50,51,51,51,51,52,52,51,52,52,52,52,51,51,51,51,51,52,51,52,52,53,53,53,54,54,54,53,54,53,53,52,52,53,52,52,52,53,52,52,51,51,51,51,50,50,50,50,51,51,51,51,52,51,52,51,50,51,50,50,50,50,50,50,50,50,50,49,49,49,49,49,49,49,50,50,50,50,50,49,49,50,49,49,48,49,49,49,49,50,49,49,50,49,49,49,49,49,49,48,49,49,49,49,48,48,48,48,48,48,47,47,47,47,47,47,47,47,48,47,47,47,48,47,48,48,48,48,47,48,47,48,47,48,48,48,48,48,48,48,48,48,48,48,48,48,48,48,48,48,48,48,47,48,47,48,47,48,48,48,48,48,49,48,49,48,48,48,48,48,48,48,48,48,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,48,48,48,48,48,48,48,49,48,48,48,48,48,48,48,47,47,47,47,47,47,47,47,47,48,47,48,48,48,48,47,48,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,46,47,47,47,46,47,47,46,46,46,46,46,47,46,47,47,47,47,48,48,48,48,48,48,47,48,48,48,47,48,47,47,47,47,47,47,47,47,47,47,47,47,48,48,47,47,47,48,47,48,48,48,48,48,48,47,47,47,47,47,47,47,47,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[592,513,442,270,153,65,53,48,45,43,42,41,40,40,40,40,41,42,43,47,54,69,189,355,507,571,565,530,384,239,82,58,49,46,44,43,43,42,42,41,40,38,38,37,37,37,37,38,39,41,44,50,67,168,390,502,586,561,520,401,288,145,70,57,50,46,43,41,40,39,39,39,40,41,43,47,54,71,185,440,546,632,647,571,522,329,187,63,52,44,42,40,39,39,39,39,38,38,37,37,37,37,37,37,37,38,40,44,50,124,425,691,703,637,552,325,148,56,48,42,41,40,39,39,39,39,38,38,37,38,38,39,42,46,58,239,506,691,656,612,514,286,81,49,43,39,38,37,37,38,38,38,38,37,37,37,37,37,37,37,37,38,39,40,44,52,82,409,685,702,660,622,436,273,75,51,45,41,39,38,38,38,38,37,38,38,38,39,40,44,51,69,351,615,710,666,613,491,229,65,47,42,39,37,37,38,38,38,38,37,37,37,37,37,37,37,37,37,37,37,39,38,41,44,54,94,354,537,615,638,478,420,169,77,56,49,45,43,42,41,41,40,40,40,40,41,43,46,51,77,265,522,672,672,637,500,347,96,55,45,41,39,38,38,38,38,38,37,37,37,37,37,37,37,37,38,38,37,38,38,39,41,45,57,152,467,617,664,566,460,261,82,57,47,44,42,42,41,40,40,40,39,39,39,40,41,45,56,194,505,702,707,623,514,220,65,46,41,38,37,37,37,38,38,38,38,37,37,37,37,37,37,37,38,37,37,37,37,38,39,42,48,90,325,609,656,644,513,324,102,59,51,45,43,42,42,41,41,40,40,39,39,39,41,45,55,153,592,718,677,638,445,207,55,44,39,38,37,37,38,38,38,38,38,37,37,37,37,37,37,37,38,38,38,37,38,38,39,40,46,66,265,536,646,663,524,377,99,64,51,45,42,41,41,41,40,40,40,39,39,39,42,45,57,233,618,729,664,602,420,162,55,44,40,38,37,37,37,38,38,38,38,37,37,37,37,37,37,37,38,38,37,37,37,38,40,41,50,90,414,636,642,645,502,342,80,60,49,45,42,42,42,41,41,39,39,38,38,39,42,46,66,369,682,738,626,527,300,81,49,42,39,37,37,37,37,37,37,37,37,37,37,37,37,37,37,37,38,37,37,37,38,39,40,44,55,221,500,672,635,606,441,194,67,53,48,44,42,42,42,41,41,39,39,39,38,40,43,53,117,533,715,703,602,435,205,61,47,41,39,38,38,38,37,37,37,37,37,37,37,37,37,37,38,38,38,38,37,37,37,39,41,46,59,252,505,664,587,554,380,131,62,50,47,44,43,42,43,42,41,40,39,39,39,41,45,60,216,568,698,684,560,402,138,60,47,41,40,38,38,38,37,38,37,37,37,37,37,37,37,37,38,38,39,38,37,37,38,39,41,47,64,268,512,623,581,514,329,88,59,49,46,44,43,43,43,42,41,40,39,39,39,41,45,60,248,567,709,647,554,376,133,59,47,42,40,39,39,39,38,38,38,37,37,37,37,37,38,38,38,39,38,38,37,37,38,39,41,45,61,204,535,641,585,494,365,120,60,50,46,44,43,43,43,43,42,40,39,39,38,40,43,53,104,454,666,690,597,434,198,65,49,43,41,39,39,39,39,38,38,37,37,37,37,37,38,38,39,39,40,39,38,37,37,37,38,40,44,57,211,540,660,616,497,377,103,58,49,46,44,45,45,45,45,44,41,40,39,38,39,41,46,67,357,632,717,621,506,264,85,52,45,42,40,40,40,40,39,39,38,37,37,37,37,38,38,39,40,41,41,40,38,37,37,37,38,39,43,53,174,529,675,625,523,376,129,60,50,47,46,46,47,48,48,46,43,40,39,38,38,39,42,51,118,484,688,682,580,406,173,63,49,44,42,42,43,43,43,42,40,39,37,37,37,37,38,39,40,42,43,43,42,40,37,37,37,37,38,41,48,79,435,649,660,567,431,225,72,54,50,50,50,53,56,58,54,48,43,40,38,37,38,39,43,55,216,584,715,654,544,354,129,60,49,46,45,47,48,49,49,46,42,40,37,37,37,37,39,41,44,47,50,50,47,43,39,37,37,37,37,38,41,48,71,275,504,572,508,382,243,143,85,79,93,158,219,237,179,86,58,47,42,39,39,38,40,43,50,76,285,552,626,623,502,393,262,152,95,80,87,87,96,73,63,52,46,42,40,39,39,39,41,45,49,55,58,56,51,46,42,39,38,37,37,37,38,39,41,43,45,48,51,55,60,66,80,135,188,222,243,225,154,76,58,50,45,42,41,40,40,40,40,42,44,46,49,53,62,85,174,290,368,433,413,365,279,179,88,63,54,49,46,44,42,42,42,42,43,44,46,47,49,50,51,51,50,48,47,45,43,42,40,39,38,37,37,38,38,39,41,44,50,60,80,139,201,221,184,147,106,81,68,61,56,52,48,45,43,41,40,40,39,39,40,42,44,48,55,73,135,245,314,324,295,218,140,87,69,60,56,53,50,48,46,44,43,42,42,43,44,47,50,54,59,62,62,59,55,51,48,45,44,43,42,41,41,40,39,39,39,39,39,41,42,46,52,62,83,136,178,165,123,83,68,60,55,51,49,48,46,44,43,42,41,40,40,40,41,42,44,48,54,65,84,135,171,165,122,82,67,59,55,52,50,48,48,46,45,44,43,43,43,43,44,47,49,53,57,59,59,58,54,51,48,45,44,43,42,42,42,42,41,41,40,39,40,40,40,41,43,45,49,54,60,66,69,67,63,58,55,52,50,49,48,48,47,46,45,44,43,42,42,41,42,43,44,47,50,53,57,60,60,60,59,57,55,53,52,51,50,49,49,48,47,46,45,45,45,45,46,47,48,51,53,55,56,56,55,53,51,50,49,48,47,47,47,47,46,46,45,45,44,44,44,44,45,45,46,47,48,48,48,48,48,48,48,48,47,48,48,48,48,48,48,48,47,47,47,46,47,46,47,47,48,48,49,48,49,49,48,48,48,48,48,49,48,49,49,49,49,48,48,48,48,48,48,48,48,48,49,49,49,49,48,48,48,48,48,48,48,48,48,48,48,47,47,47,47,47,47,46,47,47,47,47,47,47,47,47,47,47,47,46,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,47,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,46,45,46,45,45,46,45,45,46,46,46,46,46,46,46,45,46,46,45,45,46,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,46,45,45,46,46,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,45,46,45,46,45,45,45,45,4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Fs = 11000; % Sampling frequency

T = 1/Fs; % Sampling period

L = 3000; % Length of signal

t = (0:L-1)\*T;

Y = fft(formanteUMoi);

P2 = abs(Y/L);

P1 = P2(1:L/2+1);

P1(2:end-1) = 2\*P1(2:end-1);

f = Fs\*(0:(L/2))/L;

plot(f,P1)

title('Single-Sided Amplitude Spectrum of X(t)')

xlabel('f (Hz)')

ylabel('|P1(f)|')

coordx = [190, 201, 242, 583, 513, 498, 473, 399, 278, 630, 748, 190, 454, 473, 381];

coordy = [946, 1184, 949, 1166, 773, 1008 ,924, 784, 2827, 1063, 1316, 770, 883, 953, 946];

plot(coordx(1:3),coordy(1:3), "square", "MarkerSize",10, "LineWidth",3)

hold on

plot(coordx(4:6),coordy(4:6), "diamond", "MarkerSize",10, "LineWidth",2)

plot(coordx(7:9),coordy(7:9), "pentagram", "MarkerSize",10, "LineWidth",2)

plot(coordx(10:12),coordy(10:12), "^", "MarkerSize",10, "LineWidth",2)

plot(coordx(13:15),coordy(13:15), "o", "MarkerSize",10, "LineWidth",2)

axis([0 1000 0 2000])

xlabel("Hz (0-1000)");

ylabel("Hz (0-2000")

legend("A", "E", "I", "O", "U", 'Location','southeast')

hold off

coordx = [190, 201, 242, 583, 513, 498, 473, 399, 278, 630, 748, 190, 454, 473, 381];

coordy = [946, 1184, 949, 1166, 773, 1008 ,924, 784, 2827, 1063, 1316, 770, 883, 953, 946];

plot(coordx(1),coordy(1), "bsquare", "MarkerSize",10, "LineWidth",2)

hold on

plot(coordx(2),coordy(2), "gsquare", "MarkerSize",10, "LineWidth",2)

plot(coordx(3),coordy(3), "rsquare", "MarkerSize",10, "LineWidth",2)

plot(coordx(4),coordy(4), "bdiamond", "MarkerSize",10, "LineWidth",2)

plot(coordx(5),coordy(5), "gdiamond", "MarkerSize",10, "LineWidth",2)

plot(coordx(6),coordy(6), "rdiamond", "MarkerSize",10, "LineWidth",2)

plot(coordx(7),coordy(7), "bpentagram", "MarkerSize",10, "LineWidth",2)

plot(coordx(8),coordy(8), "gpentagram", "MarkerSize",10, "LineWidth",2)

plot(coordx(9),coordy(9), "rpentagram", "MarkerSize",10, "LineWidth",2)

plot(coordx(10),coordy(10), "b^", "MarkerSize",10, "LineWidth",2)

plot(coordx(11),coordy(11), "g^", "MarkerSize",10, "LineWidth",2)

plot(coordx(12),coordy(12), "r^", "MarkerSize",10, "LineWidth",2)

plot(coordx(13),coordy(13), "bo", "MarkerSize",10, "LineWidth",2)

plot(coordx(14),coordy(14), "go", "MarkerSize",10, "LineWidth",2)

plot(coordx(15),coordy(15), "ro", "MarkerSize",10, "LineWidth",2)

axis([0 1000 0 2000])

xlabel("Hz (0-1000)");

ylabel("Hz (0-2000")

legend("Verduzco", "Terrazas", "Moises")

hold off