el29 = [0.239, 0.234, 0.229, 0.226, 0.197, 0.197, 0.212, 0.199, 0.187, 0.19, 0.169, 0.177, 0.167, 0.187, 0.177, 0.197,

0.215, 0.222, 0.222, 0.227, 0.241, 0.257, 0.268, 0.28250000000000003, 0.29700000000000004, 0.3115, 0.326,

0.33475, 0.3435, 0.35225, 0.361, 0.37, 0.379, 0.388, 0.397, 0.3995, 0.402, 0.40449999999999997, 0.407,

0.40199999999999997, 0.397, 0.392, 0.387, 0.379, 0.371, 0.363, 0.355, 0.3485, 0.34199999999999997, 0.3355,

0.329, 0.3315, 0.334, 0.3365, 0.339, 0.3305, 0.322, 0.3135, 0.305, 0.3005, 0.296, 0.2915, 0.287, 0.2965, 0.306,

0.3155, 0.325, 0.33375, 0.3425, 0.35125, 0.36, 0.36675, 0.3735, 0.38025, 0.387, 0.38075000000000003, 0.3745,

0.36824999999999997, 0.362, 0.356, 0.35, 0.34400000000000003, 0.338, 0.33025000000000004, 0.3225, 0.31475,

0.307, 0.3015, 0.296, 0.2905, 0.285, 0.27599999999999997, 0.267, 0.258, 0.249, 0.244]

el32 = [0.1845, 0.17425000000000002, 0.164, 0.152, 0.205, 0.162, 0.178, 0.155, 0.162, 0.172, 0.142, 0.135, 0.143, 0.143,

0.157, 0.172, 0.192, 0.186, 0.188, 0.16, 0.174, 0.192, 0.207, 0.2215, 0.236, 0.2505, 0.265, 0.275,

0.28500000000000003, 0.295, 0.305, 0.3125, 0.32, 0.3275, 0.335, 0.33875, 0.3425, 0.34625, 0.35, 0.34425, 0.3385,

0.33275, 0.327, 0.319, 0.311, 0.303, 0.295, 0.28875, 0.2825, 0.27625, 0.27, 0.28425, 0.2985,

0.31275000000000003, 0.327, 0.323, 0.319, 0.315, 0.311, 0.29125, 0.2715, 0.25175000000000003, 0.232,

0.24200000000000002, 0.252, 0.262, 0.272, 0.28150000000000003, 0.29100000000000004, 0.3005, 0.31, 0.3155, 0.321,

0.3265, 0.332, 0.32625000000000004, 0.3205, 0.31475, 0.309, 0.30225, 0.2955, 0.28874999999999995, 0.282,

0.27249999999999996, 0.263, 0.2535, 0.244, 0.23625, 0.22849999999999998, 0.22075, 0.213, 0.211, 0.209, 0.207,

0.205, 0.19474999999999998]

el35 = [0.179, 0.17400000000000002, 0.169, 0.157, 0.178, 0.169, 0.169, 0.163, 0.179, 0.151, 0.131, 0.159, 0.146, 0.142,

0.157, 0.174, 0.181, 0.179, 0.187, 0.139, 0.154, 0.174, 0.189, 0.20400000000000001, 0.219, 0.23399999999999999,

0.249, 0.2615, 0.274, 0.2865, 0.299, 0.30625, 0.3135, 0.32075, 0.328, 0.33075, 0.3335, 0.33625000000000005,

0.339, 0.332, 0.325, 0.318, 0.311, 0.305, 0.299, 0.293, 0.287, 0.28025, 0.27349999999999997, 0.26675, 0.26,

0.27725, 0.2945, 0.31175, 0.329, 0.32525000000000004, 0.3215, 0.31775, 0.314, 0.29275, 0.2715, 0.25025, 0.229,

0.23900000000000002, 0.249, 0.259, 0.269, 0.281, 0.29300000000000004, 0.305, 0.317, 0.32, 0.323, 0.326, 0.329,

0.3235, 0.318, 0.3125, 0.307, 0.29775, 0.2885, 0.27925, 0.27, 0.25975000000000004, 0.2495, 0.23925000000000002,

0.229, 0.2215, 0.21400000000000002, 0.20650000000000002, 0.199, 0.1965, 0.194, 0.1915, 0.189, 0.184]

el38 = [0.203, 0.1945, 0.186, 0.197, 0.201, 0.201, 0.19, 0.208, 0.186, 0.175, 0.156, 0.156, 0.166, 0.176, 0.166, 0.171,

0.186, 0.204, 0.203, 0.166, 0.186, 0.205, 0.216, 0.23225, 0.2485, 0.26475000000000004, 0.281, 0.29225, 0.3035,

0.31475000000000003, 0.326, 0.335, 0.344, 0.353, 0.362, 0.3655, 0.369, 0.3725, 0.376, 0.369, 0.362, 0.355,

0.348, 0.33999999999999997, 0.33199999999999996, 0.324, 0.316, 0.3115, 0.307, 0.3025, 0.298, 0.312,

0.32599999999999996, 0.33999999999999997, 0.354, 0.3525, 0.351, 0.3495, 0.348, 0.32499999999999996, 0.302,

0.279, 0.256, 0.26725, 0.27849999999999997, 0.28975, 0.301, 0.31275, 0.3245, 0.33625, 0.348, 0.352, 0.356, 0.36,

0.364, 0.357, 0.35, 0.343, 0.336, 0.3265, 0.317, 0.3075, 0.298, 0.288, 0.278, 0.268, 0.258, 0.25125000000000003,

0.2445, 0.23775000000000002, 0.231, 0.22825, 0.2255, 0.22275, 0.22, 0.2115]

el41 = [0.182, 0.17200000000000001, 0.162, 0.145, 0.194, 0.205, 0.177, 0.161, 0.182, 0.162, 0.157, 0.138, 0.142, 0.152,

0.119, 0.133, 0.164, 0.162, 0.162, 0.142, 0.158, 0.174, 0.194, 0.21100000000000002, 0.228, 0.245, 0.262,

0.27375, 0.2855, 0.29725, 0.309, 0.32125, 0.3335, 0.34575, 0.358, 0.35775, 0.3575, 0.35724999999999996, 0.357,

0.34975, 0.3425, 0.33525, 0.328, 0.31925000000000003, 0.3105, 0.30174999999999996, 0.293, 0.2895,

0.28600000000000003, 0.28250000000000003, 0.279, 0.28725, 0.2955, 0.30375, 0.312, 0.31825000000000003, 0.3245,

0.33075, 0.337, 0.31125, 0.28550000000000003, 0.25975000000000004, 0.234, 0.24500000000000002, 0.256, 0.267,

0.278, 0.29125, 0.3045, 0.31775000000000003, 0.331, 0.335, 0.33899999999999997, 0.34299999999999997, 0.347,

0.34025, 0.3335, 0.32675, 0.32, 0.31025, 0.3005, 0.29075, 0.281, 0.268, 0.255, 0.24200000000000002, 0.229,

0.2215, 0.21400000000000002, 0.20650000000000002, 0.199, 0.19975, 0.2005, 0.20125, 0.202, 0.192]

el44 = [0.157, 0.157, 0.157, 0.148, 0.148, 0.162, 0.132, 0.143, 0.125, 0.152, 0.119, 0.125, 0.107, 0.127, 0.117, 0.102,

0.145, 0.127, 0.137, 0.141, 0.156, 0.174, 0.197, 0.21275, 0.2285, 0.24425000000000002, 0.26, 0.273,

0.28600000000000003, 0.299, 0.312, 0.322, 0.33199999999999996, 0.34199999999999997, 0.352, 0.35375, 0.3555,

0.35724999999999996, 0.359, 0.35175, 0.34450000000000003, 0.33725, 0.33, 0.32175, 0.3135, 0.30525, 0.297,

0.2935, 0.29, 0.2865, 0.283, 0.28925, 0.2955, 0.30174999999999996, 0.308, 0.31025, 0.3125, 0.31475, 0.317,

0.29775, 0.27849999999999997, 0.25925, 0.24, 0.24925, 0.2585, 0.26775000000000004, 0.277, 0.29200000000000004,

0.30700000000000005, 0.322, 0.337, 0.34025, 0.3435, 0.34675, 0.35, 0.34299999999999997, 0.33599999999999997,

0.329, 0.322, 0.31075, 0.2995, 0.28825, 0.277, 0.26475000000000004, 0.2525, 0.24025000000000002, 0.228, 0.21425,

0.2005, 0.18675, 0.173, 0.16899999999999998, 0.16499999999999998, 0.161, 0.157, 0.157]

el47 = [0.2025, 0.20275, 0.203, 0.196, 0.188, 0.176, 0.17, 0.162, 0.152, 0.146, 0.139, 0.138, 0.131, 0.131, 0.132,

0.139, 0.151, 0.157, 0.169, 0.181, 0.196, 0.212, 0.234, 0.2515, 0.269, 0.2865, 0.304, 0.31825, 0.3325, 0.34675,

0.361, 0.3705, 0.38, 0.3895, 0.399, 0.4015, 0.404, 0.4065, 0.409, 0.40075, 0.39249999999999996, 0.38425, 0.376,

0.36675, 0.35750000000000004, 0.34825, 0.339, 0.33575, 0.3325, 0.32925000000000004, 0.326, 0.33475, 0.3435,

0.35225, 0.361, 0.351, 0.34099999999999997, 0.331, 0.321, 0.309, 0.29700000000000004, 0.28500000000000003,

0.273, 0.28500000000000003, 0.29700000000000004, 0.309, 0.321, 0.3355, 0.35, 0.3645, 0.379, 0.3845, 0.39,

0.3955, 0.401, 0.39225, 0.3835, 0.37475, 0.366, 0.35475, 0.3435, 0.33225, 0.321, 0.30825, 0.2955, 0.28275, 0.27,

0.25625000000000003, 0.2425, 0.22875, 0.215, 0.21175, 0.20850000000000002, 0.20525000000000002, 0.202, 0.20225]

el50 = [0.216, 0.217, 0.218, 0.209, 0.201, 0.194, 0.184, 0.176, 0.167, 0.16, 0.166, 0.149, 0.14, 0.142, 0.144, 0.146, 0.154, 0.169, 0.174, 0.188, 0.204, 0.222, 0.244, 0.2625, 0.281, 0.2995, 0.318, 0.332, 0.346, 0.36, 0.374, 0.385, 0.396, 0.407, 0.418, 0.4195, 0.421, 0.4225, 0.424, 0.4155, 0.40700000000000003, 0.3985, 0.39, 0.38025, 0.3705, 0.36075, 0.351, 0.34675, 0.3425, 0.33825, 0.334, 0.3385, 0.34299999999999997, 0.3475, 0.352, 0.34325, 0.3345, 0.32575, 0.317, 0.30775, 0.2985, 0.28925, 0.28, 0.29350000000000004, 0.30700000000000005, 0.3205, 0.334, 0.34900000000000003, 0.364, 0.379, 0.394, 0.399, 0.404, 0.409, 0.414, 0.40625, 0.39849999999999997, 0.39075, 0.383, 0.37075, 0.35850000000000004, 0.34625, 0.334, 0.32025000000000003, 0.3065, 0.29275, 0.279, 0.26775000000000004, 0.2565, 0.24525000000000002, 0.234, 0.229, 0.224, 0.219, 0.214, 0.215]

el52 = [0.2375, 0.23875, 0.24, 0.231, 0.222, 0.212, 0.204, 0.195, 0.188, 0.177, 0.168, 0.159, 0.156, 0.158, 0.158,

0.161, 0.168, 0.177, 0.194, 0.202, 0.219, 0.235, 0.259, 0.27825, 0.2975, 0.31675000000000003, 0.336, 0.35025,

0.36450000000000005, 0.37875000000000003, 0.393, 0.4035, 0.41400000000000003, 0.4245, 0.435,

0.43674999999999997, 0.4385, 0.44025000000000003, 0.442, 0.4335, 0.425, 0.4165, 0.408, 0.39899999999999997,

0.39, 0.381, 0.372, 0.367, 0.362, 0.357, 0.352, 0.35724999999999996, 0.3625, 0.36775, 0.373, 0.36175,

0.35050000000000003, 0.33925, 0.328, 0.319, 0.31, 0.301, 0.292, 0.3075, 0.32299999999999995,

0.33849999999999997, 0.354, 0.36924999999999997, 0.38449999999999995, 0.39975, 0.415, 0.4205, 0.426, 0.4315,

0.437, 0.42825, 0.4195, 0.41075, 0.402, 0.389, 0.376, 0.363, 0.35, 0.33549999999999996, 0.32099999999999995,

0.3065, 0.292, 0.27875, 0.26549999999999996, 0.25225, 0.239, 0.238, 0.237, 0.236, 0.235, 0.23625]

el56 = [0.255, 0.257, 0.259, 0.251, 0.24, 0.231, 0.222, 0.212, 0.204, 0.192, 0.179, 0.173, 0.17, 0.17, 0.17, 0.171,

0.178, 0.187, 0.198, 0.211, 0.237, 0.248, 0.272, 0.29175, 0.3115, 0.33125, 0.351, 0.36574999999999996,

0.38049999999999995, 0.39525, 0.41, 0.42074999999999996, 0.4315, 0.44225000000000003, 0.453, 0.455, 0.457,

0.459, 0.461, 0.4525, 0.444, 0.4355, 0.427, 0.41625, 0.40549999999999997, 0.39475, 0.384, 0.38075000000000003,

0.3775, 0.37424999999999997, 0.371, 0.37424999999999997, 0.3775, 0.38075000000000003, 0.384, 0.3735, 0.363,

0.35250000000000004, 0.342, 0.33175, 0.3215, 0.31125, 0.301, 0.31825, 0.3355, 0.35275, 0.37, 0.38575,

0.40149999999999997, 0.41725, 0.433, 0.439, 0.445, 0.451, 0.457, 0.4475, 0.438, 0.4285, 0.419, 0.40525,

0.39149999999999996, 0.37775, 0.364, 0.34875, 0.3335, 0.31825, 0.303, 0.29025, 0.27749999999999997, 0.26475,

0.252, 0.25175000000000003, 0.2515, 0.25125, 0.251, 0.253]

# pro =

new = pro[0:20]

for i in range(20, len(pro)):

if i + 1 == len(pro):

inter = (pro[0] - pro[i]) / 4

else:

inter = (pro[i + 1] - pro[i]) / 4

new += [pro[i]]

new += [pro[i] + inter]

new += [pro[i] + inter \* 2]

new += [pro[i] + inter \* 3]

print(new)

print(len(new))