COSTI RANDOM, PESI ONE-PEAK, $\Delta = 3$, n=100, q=0.95

Istanza 37

100; 3; 0.950000; [4.44, 4.99, 4.76, 9.11, 4.96, 1.79, 5.91, 6.94, 10.0, 9.1, 1.73, 2.87, 9.4, 2.49, 9.68, 3.57, 8.86, 8.0, 4.29, 9.71, 4.92, 3.85, 2.68, 4.35, 1.56, 2.77, 6.35, 4.93, 5.36, 2.84, 3.62, 5.41, 9.49, 2.54, 8.43, 4.91, 6.67, 8.93, 5.16, 5.39, 7.06, 7.87, 1.87, 9.37, 8.7, 5.9, 1.99, 4.81, 7.87, 1.85, 9.22, 2.65, 1.06, 6.45, 1.19, 7.94, 4.62, 1.85, 5.96, 1.42, 3.41, 4.16, 9.81, 4.66, 8.4, 3.19, 2.58, 4.79, 9.77, 7.82, 6.51, 7.42, 5.62, 7.07, 2.64, 9.02, 6.61, 7.41, 5.45, 7.33, 8.29, 3.08, 8.56, 8.16, 7.37, 8.6, 6.75, 6.69, 9.33, 5.14, 4.83, 9.52, 8.64, 9.52, 1.33, 8.88, 6.19, 2.88, 2.96, 1.7]; 0.00019999999999974 1.999999999999975e-16 1.999999999975e-16 1.99999999999975e-16 1.999999999975e-16 0.000199999999999974 1.9999999999975e-16 0.00039999999999995 1.99999999999975e-16 0.00059999999999999 0.0025999999999997 0.002799999999999965 0.003399999999955 0.003399999999999550.0047999999999935 0.00359999999999956 0.005999999999999 0.0063999999999990.006599999999991 0.00839999999999999 0.0087999999999988 0.0103999999999990.0075999999999904 0.010599999999999986 0.0113999999999985 0.01439999999999820.0153999999999998 0.018599999999999978 0.016599999999998 0.019199999999999740.033399999999996 0.028999999999999963 0.031799999999996 0.03099999999999990.0295999999999963 0.03039999999999962 0.035399999999995 0.02579999999999990.0281999999999965 0.0257999999999997 0.027999999999966 0.0265999999999999670.019399999999976 0.01959999999999975 0.018799999999976 0.0213999999999997 $0.0205999999999972\ 0.0165999999999998\ 0.0153999999999998\ 0.0147999999999982$ 0.0129999999999984 0.010999999999999985 0.009199999999988 0.010199999999999870.0033999999999955 0.00319999999999999 0.0023999999999998 0.001999999999999741.999999999999975e-16 0.000199999999999974

f obiettivo: 297.08, Time: 0.954582929611206, Status: optimal, Best bound: 297.08; f obiettivo: 301.180000, Time: 0.007867813110351562, Status: /, Best Bound: /

Istanza 38

0.0021999999999954 0.002999999999999936 0.003199999999993 0.00139999999999997 $0.003999999999991 \ 0.0047999999999999999999999999999997 \ 0.005599999999999988$ 0.00579999999999875 0.0069999999999999845 0.0077999999999983 0.010599999999999770.0123999999999974 0.0135999999999997 0.0155999999999966 0.0183999999999999 $0.017999999999996 \ 0.01919999999999957 \ 0.0205999999999955 \ 0.0251999999999999955$ 0.0259999999999943 0.0223999999999995 0.021799999999995 0.02379999999999950.027199999999994 0.02639999999999994 0.0265999999999943 0.0285999999999999880.0291999999999938 0.02919999999999938 0.035999999999999 0.03699999999999990.03479999999999 0.0289999999999936 0.0273999999999942 0.0257999999999945 $0.021799999999995 \ 0.0189999999999958 \ 0.018999999999958 \ 0.01559999999999966$ 0.0163999999999963 0.01439999999999968 0.0139999999999999 0.010799999999999760.0127999999999973 0.0113999999999974 0.0101999999999978 0.008799999999999810.0029999999999936 0.00219999999999954 0.002799999999994 0.001799999999999990.0011999999999973 0.0013999999999997 0.0007999999999983 0.0007999999999983 $0.00039999999999915\ 0.000199999999999998\ 0.0003999999999915\ 1.99999999999955e-$ 16 1.99999999999955e-16 0.0001999999999998 1.999999999999955e-16 0.00019999999999958 1.99999999999955e-16 1.999999999955e-16 1.999999999955e-16 1.999999999999955e-16 0.0001999999999999988

f obiettivo: 273.38, Time: 0.9768636226654053, Status: optimal, Best bound: 273.38; f obiettivo: 274.770000, Time: 0.009020805358886719, Status: /, Best Bound: /

Istanza 39

100; 3; 0.950000; [8.58, 8.58, 1.43, 5.64, 4.76, 2.6, 7.59, 9.26, 7.31, 5.73, 7.13, 3.61, 9.92, 4.99, 8.22, 4.87, 9.73, 6.16, 8.27, 8.25, 3.62, 8.86, 7.04, 1.89, 5.21, 8.45, 3.58, 5.44, 8.69, 1.77, 4.13, 7.24, 1.26, 8.95, 5.85, 7.05, 2.57, 8.76, 7.79, 3.38, 8.6, 7.62, 6.55, 2.94, 2.25, 3.27, 4.39, 3.53, 9.19, 2.44, 2.97, 2.63, 9.65, 7.59, 7.66, 1.11, 1.09, 3.85, 4.65, 1.6, 1.97, 9.97, 5.77, 4.49, 9.46, 4.49, 6.26, 4.09, 9.38, 3.96, 6.86, 6.6, 2.34, 5.05, 7.34, 6.73, 8.96, 2.9, 3.09, 3.09, 2.26, 9.61, 5.03, 3.94, 7.44, 6.91, 3.68, 1.94, 3.89, 1.15, 4.79, 1.22, 3.47, 4.43, 6.95, 3.52, 6.14, 8.8, 6.38, 9.1]; 0.0001999999999999 0.0001999999999999 0.00079999999999992 1.99999999999977e-16 0.0003999999999996 0.00079999999999999 $0.001999999999998 \ 0.00219999999999975 \ 0.0011999999999986 \ 0.0023999999999997$ 0.002799999999997 0.00319999999999997 0.003799999999997 0.00239999999999990.0121999999999987 0.01459999999999985 0.0157999999999984 0.0179999999999980.0149999999999984 0.02579999999999972 0.0157999999999984 0.02399999999999973 $0.023399999999973\ 0.0277999999999997\ 0.0267999999999997\ 0.025799999999999972$ 0.024599999999973 0.0233999999999973 0.02739999999997 0.028399999999997 0.031999999999966 0.0313999999999996 0.0255999999999973 0.03379999999999990.027199999999997 0.02619999999999997 0.0235999999999975 0.0229999999999999999750.024999999999974 0.0223999999999975 0.0235999999999975 0.0209999999999977 0.0157999999999984 0.01279999999999987 0.0123999999999986 0.01259999999999986

f obiettivo: 296.219999999997, Time: 0.9982430934906006, Status: optimal, Best bound: 296.219999999997; f obiettivo: 296.570000, Time: 0.008592605590820312, Status: /, Best Bound: /

Istanza 40

100; 3; 0.950000; [9.87, 3.19, 6.37, 6.25, 8.71, 3.57, 2.31, 4.76, 2.41, 3.52, 9.39, 7.17, 8.45, 9.11, 9.84, 2.4, 3.3, 5.46, 4.18, 4.88, 2.48, 3.67, 4.15, 9.7, 7.48, 1.08, 2.06, 5.74, 3.56, 7.03, 3.71, 9.66, 9.58, 2.21, 9.86, 6.04, 3.85, 2.02, 3.46, 4.96, 6.48, 6.56, 8.94, 6.67, 5.88, 9.11, 1.55, 8.14, 2.35, 4.09, 7.72, 7.25, 6.98, 7.6, 1.83, 3.48, 7.85, 3.5, 2.01, 6.05, 9.95, 3.95, 3.3, 7.21, 2.3, 7.0, 9.86, 3.05, 4.54, 1.44, 9.47, 4.2, 8.59, 6.13, 2.36, 1.68, 9.9, 8.19, 3.34, 6.94, 4.09, 8.79, 4.77, 1.07, 3.13, 4.88, 7.35, 2.04, 9.1, 7.54, 3.41, 1.51, 5.11, 5.11, 9.73, 9.68, 6.35, 4.45, 3.86, 9.82]; 0.00039999999999995 1.9999999999975e-16 1.9999999999995e-16 0.00019999999999974 0.0003999999999995 1.9999999999975e-16 1.9999999999975e-16 1.99999999999975e-16 0.0009999999999997 0.000799999999999 0.0003999999999999 0.0009999999999987 0.000999999999999987 0.000599999999999 0.00099999999999987 $0.0023999999999968\ 0.0025999999999997\ 0.0033999999999955\ 0.0033999999999955$ 0.0031999999999996 0.003599999999999956 0.005399999999993 0.006799999999999910.0103999999999987 0.01079999999999987 0.014999999999998 0.013799999999999820.0165999999999998 0.01639999999999999 0.0199999999999976 0.02039999999999990.017999999999978 0.0209999999999974 0.0281999999999965 0.02159999999999730.0247999999999968 0.0243999999999997 0.0291999999999962 0.0297999999999999620.0303999999999962 0.0269999999999965 0.0273999999999966 0.02479999999999968 0.0297999999999962 0.02779999999999964 0.0209999999999974 0.025999999999999680.024599999999997 0.02619999999999966 0.021399999999997 0.02399999999999970.0217999999999972 0.02219999999999973 0.022799999999997 0.020199999999999750.0191999999999974 0.0177999999999998 0.0193999999999976 0.017799999999998 $0.014199999999992 \ 0.01359999999999982 \ 0.0097999999999988 \ 0.01239999999999984$ 0.0095999999999987 0.0093999999999988 0.0075999999999904 0.00819999999999990.0061999999999992 0.004799999999999935 0.004999999999994 0.0055999999999999 $0.0033999999999955\ 0.0049999999999994\ 0.0027999999999965\ 0.00179999999999978$ 0.0001999999999999974

f obiettivo: 297.15, Time: 1.0636131763458252, Status: optimal, Best bound: 297.149999999999; f obiettivo: 297.150000, Time: 0.009398937225341797, Status: /, Best Bound: /

COSTI RANDOM, PESI ONE-PEAK, $\Delta = 5$, n=100, q=0.95

Istanza 41

100; 5; 0.950000; [1.54, 7.79, 7.54, 1.45, 8.8, 6.52, 9.56, 7.83, 9.62, 8.49, 7.22, 4.91, 5.4, 9.77, 3.13, 5.54, 3.25, 5.92, 9.7, 2.12, 4.71, 3.83, 7.64, 6.58, 2.61, 1.42, 9.41, 3.71, 1.75, 4.0, 2.96, 1.66, 9.29, 4.13, 6.15, 4.44, 7.14, 1.06, 1.41, 4.74, 8.22, 5.61, 5.37, 6.47, 3.71, 9.8, 4.99, 1.43, 7.41, 1.84, 9.11, 2.09, 6.43, 4.44, 2.5, 8.2, 5.45, 7.59, 6.56, 6.85, 9.23, 8.31, 3.65, 6.28, 3.77, 5.14, 6.97, 1.75, 7.24, 2.84, 3.76, 4.42, 6.44, 3.31, 1.13, 8.33, 3.01, 2.41, 3.82, 7.6, 1.79, 6.17, 9.1, 8.98, 9.48, 8.44, 4.94, 4.37, 8.23, 3.73, 1.04, 8.4, 9.46, 8.27, 1.32, 6.21, 8.31, 1.82, 8.43, 6.39]; 0.0001999999999999 0.0001999999999999 0.00019999999999993 1.999999999999992e-16 0.00059999999999999 0.000999999999999990.004599999999998 0.00839999999999998 0.007399999999998 0.008199999999999990.009999999999997 0.01339999999999995 0.0101999999999996 0.01319999999999990.017799999999999 0.0199999999999999 0.02259999999999 0.0241999999999990.02639999999999990002159999999999990002179999999999930.016199999999999960.014399999999994 0.01119999999999999 0.011799999999999 0.0101999999999990.007999999999997 0.00819999999999997 0.0077999999999997 0.00679999999999990.0007999999999997 0.0015999999999999994 0.0017999999999999 0.000999999999999999916 0.000199999999999999 0.000399999999999986

f obiettivo: 288.64, Time: 0.9988996982574463, Status: optimal, Best bound: 288.64; f obiettivo: 288.840000, Time: 0.009502887725830078, Status: /, Best Bound: /

Istanza 42

0.0051999999999994 0.00739999999999991 0.0089999999999989 0.010599999999999860.0123999999999984 0.01099999999999985 0.0125999999999984 0.013599999999999820.0143999999999982 0.01459999999999981 0.0193999999999976 0.01599999999999980.0195999999999975 0.0191999999999974 0.02199999999997 0.0253999999999999880.0263999999999965 0.02499999999999967 0.0295999999999963 0.02579999999999990.024399999999997 0.02759999999999995 0.023399999999997 0.02839999999999990.0275999999999965 0.0317999999999996 0.033399999999996 0.03319999999999960.026999999999965 0.0281999999999965 0.025199999999997 0.0271999999999964 $0.023999999999997 \ 0.02039999999999974 \ 0.019399999999976 \ 0.01979999999999974$ 0.0211999999999972 0.0193999999999976 0.014599999999981 0.0123999999999984 $0.0083999999999999 \ 0.0073999999999991 \ 0.007799999999999 \ 0.00579999999999999$ 0.007199999999991 0.00719999999999991 0.0043999999999994 0.00179999999999980.004999999999994 0.00339999999999955 0.003199999999996 0.00219999999999970.0015999999999998 0.00339999999999955 0.0011999999999984 0.001199999999999841.9999999999975e-16 0.000199999999999974 0.0005999999999992 1.99999999999975e-16 0.000199999999999974 1.9999999999999975e-16 0.000199999999999974 1.999999999999995e-1616 1.9999999999999975e-16 0.000199999999999999

f obiettivo: 312.45, Time: 0.8808867931365967, Status: optimal, Best bound: 312.45; f obiettivo: 318.050000, Time: 0.008792877197265625, Status: /, Best Bound: /

Istanza 43

100; 5; 0.950000; [7.39, 9.66, 9.87, 4.48, 6.0, 1.83, 2.34, 9.41, 8.28, 3.33, 6.89, 7.71, 3.29, 3.43, 7.88, 6.18, 7.76, 9.2, 6.25, 3.3, 6.46, 5.79, 6.87, 9.58, 1.56, 4.0, 2.22, 6.25, 8.79, 7.07, 2.06, 2.97, 2.61, 5.46, 3.53, 8.41, 2.19, 1.11, 2.58, 1.45, 6.65, 7.66, 6.47, 8.93, 7.01, 8.76, 4.46, 4.27, 2.77, 2.83, 2.07, 1.72, 5.8, 5.08, 4.35, 3.92, 6.64, 4.54, 3.44, 8.16, 1.08, 9.26, 8.0, 4.21, 2.12, 5.49, 6.24, 4.65, 6.7, 5.06, 7.3, 9.51, 2.99, 9.68, 9.82, 2.31, 4.31, 1.45, 7.24, 3.83, 6.74, 8.46, 4.13, 9.93, 8.75, 8.46, 2.06, 7.21, 4.78, 4.46, 9.21, 7.1, 9.16, 9.29, 5.25, 5.33, 2.25, 2.02, 6.56, 3.96]; 0.0001999999999999 0.0001999999999999 0.0029999999999966 0.003399999999999963 0.00399999999996 0.00499999999999990.0145999999999985 0.0175999999999998 0.0217999999999976 0.020399999999999770.020799999999978 0.02339999999999973 0.025999999999997 0.0249999999999999740.0323999999999964 0.02939999999999968 0.027999999999997 0.029999999999999680.0263999999999972 0.02099999999999977 0.0207999999999978 0.016199999999999820.0197999999999977 0.01519999999999983 0.0159999999999983 0.011999999999999986

f obiettivo: 255.6, Time: 0.8476943969726562, Status: optimal, Best bound: 255.6; f obiettivo: 255.600000, Time: 0.006982564926147461, Status: /, Best Bound: /

Istanza 44

100; 5; 0.950000; [9.16, 2.04, 8.05, 1.15, 4.89, 9.65, 6.39, 8.39, 2.82, 7.42, 9.98, 9.88, 2.62, 7.07, 5.04, 6.76, 9.29, 1.21, 3.68, 3.67, 4.3, 2.15, 9.89, 1.95, 3.08, 5.4, 3.4, 5.84, 1.76, 7.59, 2.35, 3.05, 7.14, 8.17, 6.67, 9.59, 3.54, 7.04, 2.55, 6.09, 7.13, 6.77, 1.8, 6.53, 3.41, 3.73, 2.72, 8.61, 1.91, 9.7, 1.29, 2.74, 2.21, 8.99, 1.5, 3.43, 8.4, 3.32, 9.17, 4.42, 3.18, 4.87, 2.31, 5.57, 9.68, 2.02, 9.45, 1.59, 7.59, 7.61, 8.98, 9.66, 7.53, 3.26, 2.38, 8.37, 4.64, 1.27, 1.24, 5.25, 2.31, 3.29, 2.96, 4.32, 3.77, 2.99, 6.8, 5.32, 8.02, 7.9, 9.31, 6.66, 8.18, 9.32, 6.9, 9.68, 7.65, 8.81, 1.69, 3.07]; 0.00019999999999999 0.000199999999999 0.000799999999999 0.002399999999997 0.00399999999999996 0.0047999999999994 0.00459999999999990.0033999999999963 0.0063999999999999 0.003999999999996 0.0083999999999990.0113999999999988 0.01599999999999983 0.0123999999999986 0.011199999999999880.0121999999999987 0.01719999999999983 0.019599999999998 0.01859999999999980.021999999999974 0.0241999999999975 0.0215999999999977 0.024399999999999740.0207999999999978 0.0245999999999973 0.0245999999999973 0.03099999999999965 0.027999999999997 0.03019999999999966 0.0239999999999973 0.02719999999999990.0235999999999975 0.02259999999999974 0.0227999999999977 0.022199999999999770.0141999999999985 0.0189999999999998 0.0165999999999983 0.0147999999999999830.0131999999999986 0.01399999999999985 0.0109999999999987 0.013399999999999850.0031999999999967 0.002199999999999975 0.0037999999999957 0.001199999999999860.000799999999999 0.0005999999999999 1.9999999999977e-16 1.9999999999977e-16 1.999999999977e-16 1.99999999999977e-16 0.000199999999999 0.000199999999999 0.000199999999999998

f obiettivo: 274.9500000000005, Time: 0.827033519744873, Status: optimal, Best bound: 274.9500000000005; f obiettivo: 278.890000, Time: 0.00873422622680664, Status: /, Best Bound: /

COSTI RANDOM, PESI ONE-PEAK, $\Delta = 10$, n=100, q=0.95

Istanza 45

100; 10; 0.950000; [4.62, 5.23, 1.89, 4.68, 7.04, 8.0, 4.51, 6.71, 8.07, 7.74, 8.77, 9.04, 4.66, 9.42, 6.64, 4.87, 4.5, 9.09, 9.69, 2.85, 2.77, 3.63, 8.78, 4.03, 4.49, 2.86, 4.48, 7.5, 3.76, 8.15, 1.49, 4.12, 3.0, 8.82, 1.17, 4.82, 1.84, 5.19, 9.8, 4.32, 6.24, 4.03, 5.38, 7.04, 3.21, 5.65, 1.87, 4.91, 5.52, 2.67, 7.74, 1.78, 7.11, 2.34, 4.27, 2.44, 7.49, 8.95, 7.69, 6.17, 4.17, 3.62, 4.36, 1.32, 2.24, 5.17, 5.22, 8.15, 7.05, 2.89, 3.25, 2.61, 9.04, 6.26, 3.253.16, 8.73, 9.26, 7.72, 8.22, 5.52, 6.83, 5.34, 9.75, 3.61, 1.59, 6.12, 3.17, 1.78, 3.66, 8.56, 6.68, 2.37, 1.03, 5.68, 8.34, 2.65, 5.32, 5.44, 5.17, 6.55]; 0.00019999999999947 1.99999999999945e-16 1.999999999945e-16 1.99999999999945e-16 1.999999999945e-16 1.9999999999945e-16 1.999999999945e-16 1.999999999999945e-16 0.00019999999999947 1.999999999999945e-16 1.9999999999945e-16 0.00019999999999947 1.99999999999945e-16 0.00019999999999947 0.0001999999999999947 1.99999999999945e-16 1.9999999999999996e-16 0.000399999999999999 0.00059999999999983 0.0005999999999999 0.0017999999999952 0.00339999999999997 0.0035999999999994 0.002199999999999990.0047999999999987 0.00399999999999999 0.0055999999999984 0.0069999999999990.0129999999999965 0.01399999999999962 0.0107999999999971 0.016599999999999550.019799999999946 0.0201999999999944 0.018799999999995 0.02179999999999940.023999999999935 0.02659999999999926 0.0243999999999932 0.023199999999999360.0281999999999923 0.0329999999999991 0.0341999999999904 0.03199999999999910.0281999999999923 0.0307999999999914 0.025999999999993 0.03159999999999910.0311999999999915 0.02739999999999924 0.0303999999999917 0.03119999999999999150.0235999999999937 0.0251999999999993 0.0229999999999937 0.02579999999999990.025399999999993 0.0211999999999994 0.0205999999999945 0.01839999999999950.018399999999995 0.01579999999999956 0.015999999999955 0.013999999999999 0.0115999999999968 0.011799999999999999 0.008999999999975 0.00759999999999990.0057999999999984 0.00619999999999983 0.005999999999984 0.00599999999999840.00419999999999885 0.00239999999999933 0.002199999999994 0.001799999999999520.00019999999999947 0.00019999999999947 1.99999999999945e-16

f obiettivo: 245.159999999997, Time: 0.7739226818084717, Status: optimal, Best bound: 245.159999999997; f obiettivo: 251.420000, Time: 0.007030487060546875, Status: /, Best Bound: /

Istanza 46

0.0013999999999976 0.000199999999999988 0.000599999999999 0.00239999999999990.0007999999999987 0.000999999999999983 0.0019999999999966 0.0011999999999990.00719999999999885 0.00839999999999986 0.0103999999999982 0.008799999999999850.011199999999999 0.00939999999999995 0.014399999999977 0.014199999999999770.015999999999973 0.01379999999999977 0.0145999999999976 0.0189999999999970.0191999999999967 0.02399999999999962 0.0217999999999965 0.0207999999999999640.025199999999996 0.02279999999999963 0.026599999999957 0.0289999999999953 0.0283999999999953 0.029399999999995 0.0265999999999957 0.02479999999999960.0317999999999946 0.0251999999999996 0.023799999999996 0.0257999999999990.027799999999953 0.0259999999999957 0.024599999999996 0.0233999999999962 0.0233999999999962 0.024199999999996 0.0211999999999965 0.02439999999999960.0159999999999973 0.0119999999999981 0.011999999999981 0.009799999999999840.0105999999999983 0.00939999999999985 0.005999999999991 0.00879999999999985 $0.0031999999999995 \ 0.00259999999999955 \ 0.00219999999999962 \ 0.00079999999999987$ 0.0015999999999975 0.0001999999999999988 0.000999999999983 0.0001999999999999999881.99999999999968e-16 0.00039999999999937 0.000199999999999988

f obiettivo: 347.679999999995, Time: 0.7277374267578125, Status: optimal, Best bound: 347.679999999995; f obiettivo: 347.680000, Time: 0.008745670318603516, Status: /, Best Bound: /

Istanza 47

100; 10; 0.950000; [6.61, 6.75, 3.16, 8.0, 1.05, 6.12, 7.97, 2.06, 6.63, 9.35, 5.88, 3.27, 3.57, 2.37, 4.16, 2.32, 9.58, 5.08, 9.77, 6.56, 7.21, 1.4, 7.84, 6.76, 2.71, 4.31, 5.46, 1.55, 1.85, 3.07, 6.16, 4.08, 6.58, 5.92, 7.12, 1.59, 3.53, 1.23, 6.67, 3.23, 4.11, 4.78, 2.78, 6.55, 9.97, 7.0, 3.47, 9.38, 2.91, 7.19, 4.36, 4.51, 3.45, 3.84, 7.25, 8.82, 6.96, 6.17, 4.88, 2.96, 6.3, 2.21, 3.91, 3.06, 6.35, 3.87, 6.41, 8.44, 8.74, 6.06, 7.63, 8.72, 8.43, 7.29, 4.2, 2.71, 4.84, 7.02, 3.25, 1.9, 3.05, 3.06, 4.68, 6.09, 4.37, 5.31, 4.25, 7.21, 4.1, 5.8, 9.6, 4.28, 5.93, 5.45, 2.84, 8.83, 1.76, 1.83, 4.57, 3.34]; 0.0001999999999952 1.999999999999953e-16 1.9999999999953e-16 0.000199999999999952 0.001199999999997 0.00019999999999952 0.0005999999999985 0.000599999999999985 0.0009999999999976 0.000799999999999810.00279999999999935 0.003599999999999917 0.002399999999994 0.004999999999999880.0079999999999981 0.01019999999999976 0.0105999999999976 0.01459999999999965 $0.017199999999996 \ 0.0207999999999995 \ 0.0271999999999936 \ 0.0241999999999944$ 0.028999999999932 0.02679999999999935 0.031399999999993 0.02819999999999930.0325999999999992 0.0291999999999999 0.032599999999999 0.02899999999999990.02979999999999930.028399999999999320.03219999999999920.026399999999999970.0327999999999992 0.02399999999999994 0.02899999999999932 0.0235999999999999440.019399999999955 0.0193999999999955 0.016799999999996 0.0181999999999996

f obiettivo: 261.0700000000005, Time: 0.8744773864746094, Status: optimal, Best bound: 261.0700000000005; f obiettivo: 261.270000, Time: 0.006705045700073242, Status: /, Best Bound: /

Istanza 48

100; 10; 0.950000; [1.89, 5.54, 8.35, 9.55, 6.67, 8.43, 2.89, 9.5, 3.93, 1.79, 9.79, 4.83, 6.5, 4.48, 3.54, 8.64, 5.83, 9.73, 4.28, 2.12, 2.93, 1.02, 2.44, 3.03, 4.04, 1.25, 2.79, 3.99, 3.47, 6.76, 2.14, 8.89, 2.45, 6.32, 7.47, 6.45, 9.56, 4.82, 7.49, 8.6, 4.02, 5.96, 5.2, 8.51, 9.09, 9.84, 4.65, 8.31, 8.08, 8.37, 4.77, 5.34, 8.42, 7.76, 3.57, 4.06, 6.71, 3.28, 10.0, 8.98, 9.18, 8.79, 6.67, 2.64, 7.92, 5.45, 2.27, 2.92, 2.97, 9.75, 2.62, 9.59, 1.56, 4.54, 7.63, 8.52, 2.69, 9.53, 5.6, 9.39, 7.24, 4.55, 8.75, 3.22, 5.31, 8.34, 6.62, 7.56, 2.75, 7.16, 1.18, 6.63, 9.26, 3.25, 7.3, 7.63, 5.72, 9.67, 5.95, 6.64]; 0.0001999999999996 0.00059999999999988 $1.999999999996e-16\ 0.00019999999999996\ 0.0001999999999996\ 1.9999999999996e-16$ 1.999999999996e-16 0.0001999999999999 0.00139999999999972 0.0005999999999988 0.00139999999999972 0.000999999999999998 0.00159999999999968 0.001199999999999750.0031999999999936 0.001799999999999965 0.0031999999999936 0.00459999999999990.0057999999999988 0.00739999999999986 0.009999999999998 0.00959999999999980.0125999999999974 0.01059999999999998 0.0117999999999977 0.011799999999999770.0171999999999965 0.01799999999999964 0.019799999999996 0.018599999999999640.0245999999999952 0.02379999999999953 0.022399999999955 0.0229999999999999550.027399999999945 0.0275999999999944 0.0231999999999953 0.027399999999999450.028199999999944 0.0281999999999944 0.029399999999994 0.026399999999999880.030599999999994 0.029599999999999942 0.0257999999999948 0.028199999999999440.0251999999999948 0.0319999999999994 0.0233999999999952 0.028199999999999440.0233999999999952 0.01759999999999966 0.021199999999996 0.021599999999999560.0161999999999968 0.01259999999999974 0.0143999999999972 0.0091999999999980.009399999999981 0.0073999999999986 0.007999999999985 0.00619999999999880.0035999999999993 0.004399999999999 0.0051999999999989 0.0043999999999992 0.0011999999999975 0.00039999999999999 0.00059999999999988 0.00099999999999990.0005999999999988 0.0003999999999999999999999999999996 1.99999999999996e-16 1.999999999996e-16 1.9999999999996e-16 1.99999999996e-16 1.9999999996e-16 1.999999999999996e-16 0.00019999999999999

f obiettivo: 298.3000000000007, Time: 0.7174525260925293, Status: optimal, Best bound: 298.3000000000007; f obiettivo: 298.300000, Time: 0.006985187530517578, Status: /, Best Bound: /

COSTI RANDOM, PESI ONE-PEAK, $\Delta = 3$, n=200, q=0.95

Istanza 49

```
200; 3; 0.950000; [4.24, 5.85, 4.3, 6.76, 7.38, 4.18, 7.44, 5.79, 5.29, 3.09, 3.37, 8.74, 3.34, 3.81, 9.8, 3.72,
8.08, 3.12, 3.11, 9.66, 3.1, 9.37, 7.55, 3.49, 7.9, 4.05, 3.21, 6.35, 3.09, 4.06, 5.24, 2.41, 3.36, 7.83, 4.43, 2.01,
7.69, 3.42, 2.81, 1.81, 2.76, 6.51, 9.43, 7.5, 4.12, 4.81, 6.52, 7.67, 2.71, 7.66, 8.59, 6.22, 2.33, 3.34, 6.05,
9.91, 2.84, 4.55, 1.31, 8.63, 8.02, 3.89, 5.96, 4.19, 6.75, 4.21, 7.59, 1.18, 1.48, 7.29, 4.05, 4.82, 8.19, 8.02,
9.65, 9.11, 2.78, 9.21, 8.27, 4.6, 9.88, 7.33, 4.67, 3.5, 4.62, 4.04, 8.88, 5.42, 8.5, 4.76, 2.08, 7.93, 3.71, 2.85,
6.17, 3.8, 8.06, 4.41, 2.81, 6.71, 8.8, 2.58, 8.63, 5.05, 8.51, 8.31, 1.22, 5.27, 7.52, 7.62, 9.53, 1.44, 6.41, 2.33,
7.48, 4.68, 6.92, 8.05, 5.94, 9.96, 8.59, 2.04, 1.13, 2.53, 1.45, 9.1, 3.26, 3.19, 2.85, 9.91, 7.75, 5.91, 6.14,
1.56, 8.48, 8.66, 2.25, 3.85, 9.41, 4.09, 5.71, 8.12, 7.8, 7.9, 8.7, 6.77, 1.97, 4.54, 6.98, 5.29, 2.16, 1.33, 2.48,
4.82, 3.91, 5.73, 8.14, 1.5, 6.71, 1.32, 7.64, 5.83, 6.83, 4.16, 6.99, 6.96, 6.81, 6.68, 6.39, 3.5, 9.25, 1.39, 8.8,
7.3, 6.45, 4.63, 8.08, 6.59, 6.04, 2.53, 2.64, 2.42, 6.79, 2.86, 1.15, 9.12, 5.57, 5.95, 4.76, 1.6, 2.87, 7.42, 4.08,
8.44, 1.96, 6.93, 3.42, 3.83, 1.98, 6.4]; 0.00019999999999933 1.999999999999999
1.99999999999832e-16 1.999999999999832e-16 1.99999999999832e-16 0.000199999999999833
1.99999999999832e-16 1.999999999999832e-16 1.99999999999832e-16 1.9999999999999832e-16
1.99999999999832e-16 1.999999999999832e-16 1.99999999999832e-16 1.999999999999832e-16
1.99999999999832e-16 1.999999999999832e-16 1.99999999999832e-16 0.00019999999999833
1.99999999999832e-16 0.0001999999999999833 1.999999999999832e-16 1.999999999999832e-16
0.0001999999999998331.9999999999999832e-161.99999999999832e-160.000799999999999933
0.000399999999999666 1.999999999999832e-16 1.999999999999832e-16
0.000199999999999833 0.0007999999999999933 0.000599999999995 0.0005999999999999
0.0007999999999933 0.00039999999999999666 0.000599999999995 1.999999999999832e-16
0.00039999999999666\ 0.00099999999999916\ 0.001199999999999\ 0.00099999999999916
0.0011999999999999900.002799999999999766 0.001599999999999866 0.00339999999999716
0.0017999999999985 0.003199999999999733 0.0045999999999962 0.00499999999999585
0.0049999999999585 0.003599999999997 0.005599999999953 0.0057999999999952
0.0045999999999962 0.0061999999999948 0.00379999999999683 0.0059999999999999
0.0055999999999953 0.004999999999999585 0.00659999999999445 0.005599999999999953
0.00659999999999445 0.00779999999999935 0.007199999999994 0.0081999999999931
0.0077999999999935 0.00979999999999918 0.0075999999999937 0.0107999999999999
0.0103999999999913\ 0.01039999999999913\ 0.012399999999999995\ 0.010199999999999914
0.0109999999999970.01019999999999140.01339999999998880.01419999999999881
0.014399999999988 0.01399999999999882 0.0131999999999889 0.0107999999999999
0.01519999999999873 0.01339999999999888 0.0151999999999873 0.0167999999999986
0.014399999999988 0.011999999999999999999999999865 0.01579999999999999866
0.0147999999999876 0.012399999999999999999999999988 0.013799999999999885
0.0131999999999889 0.01639999999999863 0.016599999999986 0.01719999999999858
0.0149999999999875 0.0167999999999986 0.01599999999999865 0.0161999999999864
0.0137999999999885 0.01559999999999987 0.01199999999999 0.01599999999999865
0.0159999999999865 0.011399999999999905 0.01239999999999895 0.0125999999999999894
0.009799999999918 0.01339999999999888 0.01199999999999 0.0101999999999914
0.010399999999913 0.0109999999999997 0.008999999999925 0.009399999999999
0.0067999999999943 0.0081999999999931 0.0061999999999948 0.00559999999999953
0.008399999999993 0.0085999999999999 0.0049999999999585 0.004799999999996
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f obiettivo: 551.310000000001, Time: 5.096514940261841, Status: optimal, Best bound: 551.310000000001; f obiettivo: 552.350000, Time: 0.039891958236694336, Status: /, Best Bound: /

Istanza 50

200; 3; 0.950000; [6.92, 6.14, 3.66, 4.12, 7.84, 3.93, 7.14, 9.37, 7.26, 7.93, 8.73, 4.56, 3.14, 1.95, 8.24, 2.83, 1.74, 9.33, 7.59, 4.41, 8.55, 5.69, 6.3, 6.53, 9.76, 7.9, 7.56, 1.34, 4.26, 4.33, 3.26, 5.03, 5.54, 2.66, 8.17, 5.15, 9.05, 6.98, 3.73, 4.9, 1.43, 4.81, 7.74, 8.11, 8.72, 1.01, 9.66, 2.51, 4.59, 2.29, 2.33, 5.68, 4.75, 7.53, 1.35, 2.29, 1.7, 8.85, 2.53, 5.88, 6.02, 1.23, 4.68, 5.19, 4.11, 7.16, 5.97, 4.69, 5.7, 2.2, 5.19, 3.47, 5.94, 6.01, 4.7, 2.92, 8.98, 5.95, 6.08, 5.11, 7.31, 8.81, 9.74, 1.59, 7.1, 7.25, 9.5, 5.29, 2.0, 3.64, 7.25, 7.63, 4.39, 1.6, 2.06, 9.93, 2.15, 8.63, 6.82, 6.58, 5.28, 5.65, 3.73, 6.92, 3.71, 7.61, 6.58, 4.17, 3.35, 8.0, 1.89, 5.11, 9.65, 3.74, 1.21, 8.48, 1.33, 1.67, 5.39, 9.89, 6.44, 2.87, 3.08, 4.02, 6.39, 1.8, 5.38, 7.36, 6.91, 8.24, 7.19, 2.32, 4.08, 9.75, 8.24, 7.39, 7.23, 9.49, 3.83, 4.5, 3.35, 7.58, 9.82, 4.63, 5.93, 7.36, 2.35, 1.32, 2.33, 4.95, 9.27, 8.88, 1.44, 7.36, 2.41, 3.32, 8.12, 4.59, 8.14, 2.65, 1.73, 3.62, 5.82, 1.23, 5.42, 4.06, 1.91, 1.65, 7.86, 9.63, 2.58, 6.83, 1.5, 9.85, 7.84, 2.34, 4.36, 4.21, 6.91, 1.16, 9.17, 2.67, 3.19, 7.8, 1.72, 4.21, 7.78, 9.74, 9.9, 3.21, 4.67, 5.24, 7.05, 1.19, 9.33, 8.92, 4.85, 8.64, 9.73, 2.88]; 0.00039999999999976 1.99999999999988e-16 1.9999999999988e-160.00039999999999999760.000199999999999880.000199999999999880.00019999999999880.0003999999999999761.9999999999988e-161.9999999999988e-160.00059999999999964 1.99999999999988e-16 0.00059999999999964 0.00039999999999976 $0.0005999999999964\ 0.0001999999999988\ 0.0001999999999988\ 0.00039999999999976$ 0.001799999999999910.00139999999999915 0.0003999999999976 0.0007999999999999520.0005999999999964 0.0015999999999999903 0.0023999999999855 0.00219999999999867 $0.0013999999999915\ 0.001599999999999903\ 0.0025999999999843\ 0.00239999999999855$ 0.004399999999973 0.0053999999999967 0.00499999999997 0.006599999999996 0.005999999999964 0.00579999999999965 0.006199999999999625 0.0075999999999999940.0079999999999952 0.00799999999999952 0.009199999999944 0.007599999999999540.00719999999999564 0.00819999999999995 0.006599999999996 0.0069999999999980.0111999999999932 0.0099999999999994 0.0125999999999924 0.0113999999999931

0.0127999999999923 0.016799999999999 0.0143999999999913 0.014199999999999140.0141999999999914 0.0123999999999925 0.011399999999931 0.0139999999999915 $0.0079999999999952\ 0.008199999999995\ 0.0107999999999935\ 0.0105999999999996$ 0.0083999999999950.00839999999999950.0083999999999950.006999999999999988 $0.008199999999995 \ 0.0067999999999999999999999999999994 \ 0.006199999999999625$ 0.0053999999999967 0.0065999999999996 0.0045999999999972 0.0051999999999996850.0045999999999972 0.003199999999999806 0.004199999999975 0.00359999999999820.0045999999999972 0.00399999999999976 0.0047999999999971 0.00399999999999760.0045999999999972 0.00219999999999867 0.00359999999999782 0.002199999999998670.00219999999999867 0.00199999999999988 0.0007999999999952 0.0013999999999999150.0013999999999915 0.0019999999999988 0.000999999999994 0.00159999999999999 $0.0005999999999964\ 1.99999999999988e-16\ 0.00019999999999988\ 0.00039999999999976$ 0.00019999999999881.99999999999988e-16 0.00059999999999964 1.9999999999988e-160.0005999999999964 0.000399999999999976 1.9999999999988e-16 1.999999999999988e-160.0001999999999988 1.99999999999988e-16 1.999999999988e-16 1.9999999999988e-16 1.9999999999988e-16 1.99999999999988e-16 1.999999999988e-16 1.9999999999999988e-16 1.999999999988e-16 1.9999999999988e-16 1.999999999988e-16 1.999999999988e-16 0.0001999999999988 0.000199999999999988 1.9999999999988e-16 1.9999999999999988e-161.999999999988e-16 1.9999999999988e-16 1.999999999988e-16 1.999999999988e-16 1.999999999988e-16 1.99999999999988e-16 1.999999999988e-16 1.9999999999988e-16 1.99999999999988e-16 0.00019999999999988

f obiettivo: 563.22, Time: 5.475784778594971, Status: optimal, Best bound: 563.219999999999; f obiettivo: 564.850000, Time: 0.05437183380126953, Status: /, Best Bound: /

Istanza 51

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0.000199999999999876 1.99999999999999876e-16 0.0001999999999999876 1.999999999999999876e-
16 1.99999999999876e-16 0.0003999999999975 1.99999999999876e-16
0.00019999999999876 0.000399999999999975 1.99999999999876e-16 0.00039999999999975
0.0011999999999925\ 0.00039999999999975\ 0.001199999999995\ 0.0011999999999995
0.0009999999999937 0.00179999999999999999999999999995 0.001399999999999913
0.0011999999999925 0.00039999999999975 0.0023999999999985 0.00219999999999863
0.0041999999999974 0.00559999999999965 0.0045999999999971 0.00299999999999814
0.0057999999999964 0.0047999999999997 0.0065999999999999 0.0079999999999999
0.005999999999963 0.0069999999999957 0.006399999999996 0.00679999999999988
0.0071999999999956 0.00999999999999938 0.0085999999999946 0.0063999999999996
0.0125999999999922\ 0.01099999999999932\ 0.0131999999999918\ 0.0113999999999993
0.011799999999997 0.01259999999999922 0.01379999999999915 0.01159999999999998
0.0135999999999916 0.0143999999999911 0.012799999999992 0.0145999999999991
0.0141999999999912 0.01259999999999922 0.01559999999999904 0.013799999999999915
0.0149999999999908 0.015799999999999 0.0141999999999912 0.0155999999999999
0.012999999999992 0.01439999999999911 0.01299999999999 0.0145999999999999
0.0103999999999935\ 0.0127999999999992\ 0.01479999999999900\ 0.01519999999999906
0.009999999999938 0.01199999999999926 0.0125999999999922 0.01099999999999932
0.011399999999993 \ 0.00779999999999952 \ 0.010399999999935 \ 0.0101999999999937
0.0061999999999962 0.01179999999999997 0.0103999999999935 0.00879999999999945
0.0075999999999953 0.00779999999999952 0.0051999999999968 0.0079999999999999
0.004799999999997 0.005399999999999665 0.006399999999996 0.00619999999999962
0.0053999999999665 0.00339999999999979 0.0067999999999958 0.004999999999999
0.003999999999975\ 0.002999999999999814\ 0.003999999999975\ 0.0029999999999814
0.0023999999999985 0.00399999999999975 0.003199999999998 0.0039999999999975
0.0029999999999814\ 0.00199999999999875\ 0.0035999999999978\ 0.00279999999999826
0.0025999999999984 0.002199999999999863 0.00159999999999 0.001599999999999
0.00199999999999875 0.0027999999999999826 0.001599999999999 0.0005999999999999963
0.0003999999999975 0.000399999999999975 0.0009999999999977 1.999999999999999876e-16
0.00019999999999876\ 0.000199999999999876\ 0.0003999999999975\ 0.00019999999999876
1.9999999999876e-16 0.000199999999999876 1.999999999999876e-16
0.000199999999999876 1.99999999999876e-16 1.99999999999876e-16
0.00019999999999876 0.0003999999999999975 0.000199999999999876 1.9999999999999876e-16
0.000199999999999876 0.0003999999999999975 1.999999999999876e-16 1.99999999999999876e-16
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f obiettivo: 576.019999999999, Time: 4.833434581756592, Status: optimal, Best bound: 576.019999999999; f obiettivo: 589.490000, Time: 0.04188966751098633, Status: /, Best Bound: /

Istanza 52

200; 3; 0.950000; [2.72, 1.49, 6.36, 6.52, 4.82, 3.49, 6.99, 7.96, 4.46, 8.66, 1.02, 7.22, 7.96, 7.3, 3.5, 8.02, 6.95, 1.87, 1.28, 7.19, 4.67, 2.94, 3.8, 9.76, 2.98, 9.12, 9.21, 1.81, 5.49, 9.81, 5.43, 3.92, 7.76, 8.89, 5.77, 9.45, 7.63, 5.0, 3.95, 7.1, 7.1, 1.53, 9.3, 7.82, 3.49, 3.19, 5.25, 2.73, 5.55, 9.08, 4.44, 5.18, 3.6, 2.69, 1.42, 3.86, 3.52, 2.98, 1.21, 7.19, 1.91, 3.52, 6.66, 3.15, 7.85, 5.46, 9.98, 2.07, 6.0, 4.37, 8.41, 8.43, 9.37, 6.16, 4.28, 2.03, 1.46, 3.76, 2.67, 6.26, 4.44, 9.41, 1.17, 9.95, 3.24, 9.73, 7.29, 5.51, 5.43, 2.01, 4.46, 1.55, 6.22, 8.1, 3.55, 9.21, 1.47, 1.98, 9.36, 2.13, 4.25, 9.68, 7.66, 5.46, 4.49, 1.62, 2.47, 1.45, 6.97, 4.61, 5.33, 2.74, 7.15, 3.22, 1.18, 5.94, 5.62, 6.9, 1.83, 1.7, 2.37, 2.41, 7.64, 8.33, 6.83, 9.77, 8.02, 1.71, 4.7, 7.57, 4.24, 3.18, 1.31, 2.08, 6.28, 6.34, 6.95, 7.17, 1.47, 5.72, 9.19, 5.59, 6.35, 1.78, 4.4, 4.79, 9.86, 8.71, 6.55, 4.34, 9.95, 4.64, 5.75, 9.19, 6.52, 1.31, 1.96, 4.34, 7.39, 8.19, 5.58, 2.69, 4.83, 9.57, 9.2, 2.13, 2.52, 4.63, 2.64, 3.36, 2.61, 6.17, 3.05, 6.9, 1.58, 6.81, 6.09, 2.5, 1.58, 4.06, 3.79, 5.75, 8.19, 5.16, 7.77, 3.98, 8.48, 3.84, 3.74, 7.2, 6.91, 5.64, 3.02, 9.36, 4.89, 9.26, 3.09, 3.28, 7.78, 3.54]; 0.0001999999999999868 1.99999999999997e-1.999999999987e-16 1.9999999999987e-16 1.999999999987e-16 1.9999999999999987e-16 1.9999999999987e-16 0.0001999999999999868 1.9999999999987e-16 0.000399999999999736 1.9999999999987e-16 0.0001999999999999868 1.9999999999987e-16 1.99999999999987e-16 $0.00039999999999736\ 0.000199999999999868\ 0.000599999999996\ 0.000199999999999868$ 1.9999999999987e-16 0.0003999999999999736 0.00039999999999736 0.00079999999999947 0.0005999999999996 0.0019999999999987 0.00059999999996 1.9999999999987e-16 0.0011999999999992 0.00059999999999999 0.00159999999999999999 0.00179999999999980.001399999999999999000.002199999999999854 0.00339999999999777 0.0027999999999998180.0041999999999973 0.00199999999999987 0.0031999999999999 0.00299999999999998050.0025999999999983 0.004599999999999999696 0.003999999999974 0.005399999999999650.0085999999999944 0.00699999999999954 0.008999999999994 0.007999999999999880.009599999999937 0.007599999999999505 0.009599999999937 0.013399999999999120.0113999999999926 0.01099999999999928 0.0121999999999921 0.011999999999999220.0125999999999917 0.0137999999999991 0.0113999999999926 0.01419999999999970.011999999999922 0.0141999999999997 0.0141999999999997 0.0139999999999998 $0.0149999999999902 \ 0.01739999999999888 \ 0.014799999999904 \ 0.0103999999999932$ 0.01439999999999960 0.01259999999999997 0.0131999999999913 0.0203999999999998660.01579999999999997 0.01239999999999918 0.0183999999999878 0.01379999999999990.0149999999999902 0.01399999999999908 0.0117999999999923 0.0137999999999990.0123999999999918 0.01259999999999917 0.0101999999999933 0.01119999999999997

0.0103999999999932 0.0107999999999999 0.009999999999994 0.01039999999999990.00559999999999635 0.006599999999999957 0.0091999999999999 0.0079999999999999880.0057999999999962 0.005599999999999635 0.0061999999999959 0.006799999999999550.0073999999999952 0.00699999999999954 0.0059999999999961 0.003599999999999650.0057999999999962 0.0045999999999999696 0.0031999999999979 0.00359999999999765 $0.00159999999999995 \ 0.002199999999999854 \ 0.002399999999984 \ 0.00179999999999882$ $0.000999999999935\ 0.0011999999999992\ 0.0007999999999947\ 0.0019999999999987$ 0.0009999999999935 0.00079999999999947 0.00059999999996 1.9999999999987e-16 $0.00039999999999736 \ 0.000799999999999947 \ 0.00039999999999736 \ 0.00019999999999868$ 0.000199999999999868 0.0003999999999999736 1.999999999987e-16 1.9999999999987e-16 0.00019999999999868 0.00059999999999999996 0.00039999999999736 0.000199999999999998681.9999999999987e-16 1.99999999999987e-16 0.000199999999999868 1.99999999999987e-16 1.999999999999987e-16 0.0001999999999999868

f obiettivo: 525.5, Time: 5.1172449588775635, Status: optimal, Best bound: 525.499999999998; f obiettivo: 525.700000, Time: 0.04284310340881348, Status: /, Best Bound: /

COSTI RANDOM, PESI ONE-PEAK, $\Delta = 5$, n=200, q=0.95

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200; 5; 0.950000; [1.51, 5.48, 2.25, 9.4, 8.14, 6.92, 1.48, 1.94, 4.65, 2.03, 5.09, 3.45, 2.85, 3.28, 2.41, 2.64, 7.17, 5.29, 2.83, 7.73, 7.77, 1.75, 6.05, 2.89, 4.38, 3.33, 4.79, 9.1, 1.67, 8.41, 8.13, 3.54, 7.34, 7.15, 1.33, 1.05, 9.26, 9.58, 1.92, 3.9, 4.38, 7.09, 8.64, 8.07, 8.61, 6.62, 6.41, 7.07, 1.19, 9.74, 7.73, 3.12, 4.78, 9.33, 3.97, 6.73, 8.49, 5.74, 9.79, 1.93, 9.92, 3.53, 8.54, 9.31, 3.87, 3.98, 8.48, 9.49, 7.66, 8.38, 2.23, 9.86, 5.03, 3.49, 4.02, 3.11, 3.79, 8.65, 9.96, 9.58, 4.13, 8.15, 3.03, 6.89, 5.88, 4.09, 7.75, 9.98, 9.27, 4.49, 7.26, 2.51, 3.91, 7.18, 2.51, 6.9, 5.58, 4.31, 8.73, 5.59, 4.02, 7.3, 2.76, 9.7, 2.22, 1.94, 7.46, 9.89, 3.83, 6.48, 3.12, 2.1, 9.78, 2.76, 4.11, 2.19, 7.1, 9.17, 1.14, 2.91, 4.63, 3.09, 5.53, 9.13, 5.61, 8.55, 4.89, 9.02, 1.03, 7.14, 2.35, 1.91, 6.97, 8.8, 1.72, 9.68, 7.54, 8.02, 8.0, 5.85, 8.46, 9.98, 4.08, 5.23, 3.99, 5.28, 3.94, 5.43, 1.11, 2.83, 7.62, 8.65, 5.73, 2.33, 5.85, 8.42, 6.23, 2.38, 4.1, 8.24, 2.25, 1.73, 3.37, 9.41, 9.57, 4.74, 2.8, 2.89, 8.33, 3.86, 7.42, 5.91, 8.82, 1.67, 6.95, 2.31, 7.11, 7.45, 6.26, 3.34, 4.62, 9.08, 6.78, 4.52, 4.39, 7.49, 1.51, 1.19, 2.55, 2.26, 7.91, 9.11, 3.97, 9.27, 7.91, 6.69, 6.69, 9.52, 1.53, 6.83]; 0.00019999999999999846 1.99999999999847e-16 1.999999999999999847e-16 0.00019999999999999846 1.99999999999999847e-161.99999999999847e-16 1.999999999999847e-16 1.999999999999847e-16 1.999999999999847e-16 1.99999999999847e-16 1.999999999999847e-16 1.999999999999847e-16 1.99999999999847e-16 1.99999999999847e-16 1.999999999999847e-16 1.999999999999847e-16 1.999999999999847e-16 1.99999999999847e-16 1.999999999999847e-16 1.99999999999847e-16 1.99999999999847e-16 1.9999999999847e-16 1.999999999999847e-16 1.99999999999847e-16 1.99999999999847e-16 1.99999999999847e-16 1.999999999999847e-16 1.999999999999847e-16 1.999999999999847e-16 0.000199999999999846 1.9999999999999847e-16 0.0001999999999999846 1.99999999999847e-1616 0.00059999999999954 0.000199999999999846 0.000399999999999999 1.99999999999847e-16 0.00039999999999999693 0.0019999999999985 0.00099999999999924

0.0019999999999985 0.000599999999999994 0.0011999999999998 0.0015999999999999877 $0.002599999999998\ 0.002399999999999816\ 0.00219999999999832\ 0.00319999999999754$ 0.00219999999999832 0.00179999999999863 0.0041999999999968 0.00339999999999742 0.00359999999999726 0.0039999999999997 0.00339999999999742 0.005799999999999550.00399999999997 0.004399999999999664 0.00399999999997 0.006199999999999530.005999999999954 0.004399999999999664 0.0045999999999965 0.0067999999999994840.0081999999999937 0.0065999999999995 0.0087999999999933 0.0067999999999994840.0085999999999934 0.00839999999999935 0.007999999999994 0.01219999999999970.0093999999999928 0.01119999999999915 0.010999999999916 0.009799999999999925 $0.0123999999999906 \ 0.0117999999999991 \ 0.011599999999991 \ 0.01459999999999889$ 0.0153999999999883 0.015399999999999883 0.015999999999988 0.011999999999999980.016999999999987 0.0183999999999986 0.0119999999999998 0.0141999999999999990.009999999999924 0.01239999999999906 0.01559999999999881 0.01179999999999910.009599999999996 0.013199999999999 0.009399999999998 0.0113999999999999140.0097999999999925 0.00859999999999934 0.0075999999999942 0.00859999999999990.009799999999995 0.0077999999999941 0.0077999999999941 0.008199999999999970.0057999999999955 0.00779999999999941 0.0087999999999933 0.00639999999999510.0061999999999953 0.00419999999999968 0.00359999999999726 0.003799999999999710.0035999999999726 0.00259999999999998 0.00219999999999832 0.0035999999999997260.00219999999999832 0.00199999999999985 0.002599999999998 0.00199999999999850.0009999999999924 0.0011999999999999908 0.0007999999999999 0.00019999999999998460.0005999999999954 0.00019999999999999846 1.999999999999847e-16 0.000199999999999984616 0.000399999999999993 1.99999999999847e-16 0.000199999999999846 16 0.000199999999999846 1.99999999999847e-16 1.99999999999847e-16 1.999999999999847e-16 0.000199999999999846

f obiettivo: 570.66, Time: 5.0424439907073975, Status: optimal, Best bound: 570.66; f obiettivo: 572.440000, Time: 0.03845024108886719, Status: /, Best Bound: /

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200; 5; 0.950000; [7.07, 7.72, 6.18, 9.4, 3.68, 5.68, 5.79, 3.86, 3.47, 1.08, 2.06, 8.75, 2.87, 4.17, 9.02, 9.41, 7.97, 9.69, 4.18, 3.22, 1.94, 6.09, 8.29, 9.1, 5.64, 9.55, 6.11, 2.91, 1.01, 3.47, 9.72, 9.35, 3.57, 5.74, 1.7, 3.05, 5.54, 1.65, 5.86, 9.39, 5.65, 1.02, 8.04, 4.91, 4.95, 9.29, 6.51, 5.96, 2.08, 6.1, 4.78, 8.02, 8.76, 2.57, 5.04, 8.98, 8.91, 7.07, 8.08, 4.55, 4.31, 7.65, 6.05, 1.21, 2.54, 5.38, 6.81, 6.7, 7.94, 2.58, 5.19, 7.23, 7.9, 7.52, 5.94, 2.54, 5.89, 5.45, 9.22, 3.96, 7.53, 1.05, 5.76, 7.55, 8.08, 5.97, 8.77, 9.17, 3.93, 9.43, 8.51, 8.15, 6.57, 4.33, 6.47, 4.86, 3.06, 5.09, 5.81, 1.37, 3.36, 1.18, 2.49, 2.03, 1.41, 3.95, 5.4, 2.46, 8.26, 7.39, 7.81, 7.54, 9.81, 1.2,

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2.44, 5.0, 8.33, 5.18, 5.61, 9.7, 4.88]; 0.00019999999999952 1.999999999999852e-16
1.99999999999852e-16 1.999999999999852e-16 1.9999999999852e-16 0.00019999999999852
1.99999999999852e-160.00019999999999998520.00059999999999550.0003999999999999704
1.9999999999852e-16 1.99999999999852e-16 1.99999999999852e-16 1.99999999999852e-16
0.000199999999999852 1.9999999999999852e-16 0.0003999999999999704 1.99999999999852e-
16 0.000399999999999704 0.0007999999999941 0.00059999999999955
0.00039999999999704 0.00039999999999999704 0.0011999999999991 0.000999999999999996
1.99999999999852e-16 0.000799999999999941 0.00039999999999704 0.000399999999999704
0.00039999999999704\ 0.00159999999999882\ 0.00179999999999865\ 0.00139999999999896
0.00159999999999882 0.001199999999999991 0.0013999999999896 0.0017999999999999865
0.0015999999999982 0.00119999999999991 0.00179999999999865 0.00359999999999973
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0.005399999999999595\ 0.005599999999999958\ 0.0063999999999953\ 0.00879999999999935
0.0051999999999962 0.00859999999999936 0.005999999999955 0.00779999999999415
0.007599999999944\ 0.00919999999999932\ 0.0097999999999927\ 0.00999999999999926
0.0117999999999911 0.01219999999999999 0.01339999999999 0.01179999999999911
0.0097999999999927 0.01039999999999923 0.011999999999991 0.01159999999999914
0.01279999999999905 0.012399999999999908 0.0163999999999876 0.0149999999999888
0.0161999999999878 0.01619999999999878 0.0149999999999888 0.0149999999999888
0.0161999999999878 0.01599999999999882 0.0151999999999887 0.01279999999999999
0.0115999999999914 0.01319999999999901 0.0125999999999906 0.01139999999999915
0.0129999999999902 0.00999999999999926 0.0113999999999915 0.00759999999999944
0.011999999999991 0.01059999999999992 0.0099999999999926 0.0093999999999999
0.008199999999938 0.0101999999999924 0.0109999999999918 0.008799999999999935
0.008599999999936\ 0.0079999999999941\ 0.0077999999999415\ 0.0061999999999954
0.007999999999941 0.0047999999999964 0.0045999999999966 0.00599999999999955
0.0043999999999967 0.003199999999999763 0.004199999999999685 0.004399999999999967
0.0047999999999964 0.00359999999999973 0.002599999999981 0.00359999999999973
0.00159999999999882 0.00099999999999999996 0.0005999999999955 0.000599999999999955
0.0011999999999991 0.001599999999999882 0.0009999999999926 0.0013999999999999896
0.00039999999999704 0.000799999999999941 0.0009999999999996 0.00019999999999999852
0.00059999999999955 1.999999999999852e-16 0.000399999999999704 0.000199999999999852
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0.000199999999999852 1.999999999999852e-16 1.9999999999852e-16 1.99999999999852e-16
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200; 5; 0.950000; [2.26, 4.04, 7.28, 7.17, 1.41, 2.79, 5.54, 3.01, 4.31, 5.44, 2.97, 3.6, 8.21, 7.61, 4.13, 2.6, 6.78, 8.64, 9.57, 3.81, 8.34, 4.06, 5.07, 2.5, 5.68, 8.93, 9.03, 9.7, 7.93, 9.6, 6.99, 5.82, 1.77, 5.6, 4.66, 4.07, 6.72, 9.47, 7.62, 3.5, 7.77, 8.68, 5.29, 3.78, 4.75, 9.38, 8.0, 8.79, 7.64, 5.99, 9.37, 5.23, 7.26, 5.35, 1.49, 1.22, $4.72,\, 2.55,\, 1.35,\, 8.51,\, 7.22,\, 4.57,\, 8.36,\, 7.52,\, 2.89,\, 6.09,\, 5.65,\, 6.47,\, 4.93,\, 2.24,\, 1.56,\, 9.88,\, 4.32,\, 9.96,\, 4.54,\,$ 5.7, 6.15, 6.69, 5.34, 4.8, 7.34, 1.17, 3.18, 9.86, 1.93, 1.59, 4.4, 4.97, 6.49, 2.45, 2.8, 4.39, 3.83, 9.0, 2.97, 6.27, 6.46, 9.99, 2.76, 3.33, 4.66, 1.92, 6.21, 4.18, 4.61, 8.63, 1.93, 2.18, 9.34, 9.58, 1.06, 3.31, 5.61, 7.81, 6.9, 8.24, 5.84, 7.65, 6.2, 5.75, 2.78, 7.83, 6.38, 9.63, 9.19, 9.7, 8.6, 8.21, 6.88, 2.91, 4.67, 5.5, 9.5, 9.91, 2.87, 5.01, 4.36, 6.88, 5.85, 1.29, 8.86, 1.35, 3.94, 1.61, 8.64, 3.66, 5.17, 1.71, 6.29, 8.26, 5.35, 9.52, 8.89, 6.4, 8.91, 4.12, 7.96, 2.28, 2.91, 2.52, 1.43, 3.32, 1.94, 2.58, 2.63, 9.49, 3.54, 5.04, 7.61, 2.71, 2.37, 8.32, 5.97, 1.81, 5.48, 2.67, 5.13, 3.76, 5.49, 8.89, 3.01, 4.2, 4.35, 4.71, 1.9, 2.76, 9.27, 4.96, 2.26, 7.2, 2.99, 8.88, 2.32, 1.66, 7.67, 3.1, 9.78, 1.52, 1.92, 6.94]; 0.000199999999999884 1.99999999999999884e-16 1.9999999999884e-16 1.99999999999884e-16 1.9999999999884e-16 1.99999999999884e-16 1.9999999999884e-16 1.99999999999884e-16 1.9999999999884e-16 1.99999999999884e-16 0.00019999999999884 0.0001999999999999884 1.99999999999884e-16 1.999999999999884e-1616 1.99999999999884e-16 1.999999999999884e-16 1.999999999999884e-16 0.000199999999999884 0.000199999999999884 1.99999999999884e-160.00059999999999965 1.999999999999884e-16 0.0007999999999954 0.000199999999999884 $0.0003999999999977\ 0.000199999999999884\ 0.0001999999999884\ 0.0001999999999884$ 0.00059999999999965 0.000799999999999954 0.000399999999977 0.00039999999999977 $0.0009999999999942\ 0.00139999999999917\ 0.00179999999999895\ 0.0019999999999883$ $0.00279999999999835\ 0.00279999999999835\ 0.0027999999999835\ 0.00239999999999886$ 0.003399999999999803 0.002399999999999986 0.00319999999999815 0.0029999999999998270.0051999999999996 0.0045999999999973 0.006199999999964 0.0071999999999958 0.0055999999999967 0.00819999999999952 0.0079999999999953 0.00619999999999964 $0.0063999999999963 \ 0.0075999999999956 \ 0.008599999999995 \ 0.0071999999999988$ 0.007599999999956 0.0055999999999967 0.008999999999947 0.0081999999999952 0.007399999999957 0.0113999999999994 0.0093999999999945 0.0101999999999990.0105999999999938 0.01319999999999924 0.0145999999999915 0.009799999999999420.009599999999944 0.01099999999999935 0.015599999999999 0.011199999999999340.0125999999999927 0.017999999999999995 0.0115999999999933 0.0173999999999998980.01739999999998980.014399999999999160.0125999999999970.019199999999998870.0197999999999884 0.01339999999999922 0.0117999999999932 0.0129999999999995

0.015399999999991 0.01519999999999911 0.0145999999999915 0.009799999999999420.009999999999941 0.01659999999999993 0.012199999999999 0.01099999999999990.0123999999999928 0.01059999999999938 0.012199999999993 0.0099999999999999410.0123999999999928 0.0115999999999933 0.0115999999999933 0.00919999999999460.009999999999941 0.010199999999994 0.0125999999999997 0.0101999999999999 $0.008799999999948\ 0.0087999999999948\ 0.007199999999958\ 0.0071999999999958$ 0.0075999999999956 0.00539999999999968 0.0081999999999952 0.0055999999999999670.004999999999971 0.00559999999999967 0.004999999999971 0.0041999999999955 $0.00279999999999835\ 0.00379999999999978\ 0.0029999999999827\ 0.00419999999999755$ 0.00259999999999847 0.00439999999999974 0.00319999999999815 0.001199999999999999 $0.0013999999999917\ 0.00079999999999954\ 0.00159999999999908\ 0.00159999999999998$ 0.0007999999999954 0.000999999999999942 0.000399999999977 0.000599999999999650.0005999999999965 0.0005999999999999965 0.000199999999999884 0.000399999999999977 $0.0003999999999977\ 0.000799999999999954\ 1.99999999999884e-16\ 0.000599999999999965$ 0.00019999999999884 0.0001999999999999884 0.000199999999999884 1.999999999999884e-16 1.99999999999884e-16 1.99999999999884e-16 0.000199999999999884 1.99999999999884e-16 1.999999999999884e-16 0.000199999999999884 1.999999999999884e-16 0.000199999999999884 1.999999999999884e-16 1.9999999999884e-16 1.99999999999884e-16 0.0001999999999999884

f obiettivo: 567.069999999999, Time: 5.061442136764526, Status: optimal, Best bound: 567.040000000001; f obiettivo: 569.580000, Time: 0.043519020080566406, Status: /, Best Bound: /

Istanza 56

200; 5; 0.950000; [6.59, 5.17, 4.34, 1.73, 4.32, 4.46, 8.26, 5.05, 8.57, 1.8, 1.13, 8.88, 5.86, 5.17, 6.41, 9.46, 5.77, 2.36, 5.02, 2.61, 9.57, 5.42, 3.18, 7.04, 4.04, 1.09, 6.15, 9.01, 2.44, 5.91, 6.81, 9.62, 4.12, 8.85, 2.94, 5.67, 1.14, 4.57, 6.7, 2.76, 4.42, 7.72, 7.86, 5.0, 3.3, 8.61, 6.42, 5.9, 9.95, 9.71, 5.89, 1.66, 7.27, 7.63, 6.35, 4.3, 9.25, 5.0, 5.89, 2.91, 1.61, 7.53, 5.38, 2.93, 8.41, 5.44, 9.2, 9.74, 4.13, 1.9, 5.97, 5.24, 9.71, 2.07, 2.7, 9.23, 5.85, 6.99, 4.69, 5.28, 4.28, 4.75, 6.12, 1.21, 3.27, 9.95, 6.01, 7.18, 4.98, 2.64, 1.77, 2.57, 6.01, 7.74, 3.42, 8.58, 4.0, 6.4, 7.34, 4.15, 6.17, 6.93, 3.31, 5.47, 4.35, 4.37, 1.73, 4.48, 3.02, 7.41, 2.25, 3.41, 8.23, 8.14, 3.02, 3.41, 3.42,1.84, 2.6, 2.2, 7.97, 9.55, 8.85, 8.16, 8.18, 1.52, 1.56, 1.77, 5.74, 9.49, 4.82, 7.48, 8.74, 9.35, 9.88, 1.61, 4.53, 2.69, 9.42, 6.48, 6.56, 1.79, 3.17, 8.07, 9.0, 3.86, 5.31, 2.5, 6.09, 8.21, 7.69, 3.87, 1.4, 4.53, 4.03, 4.31, 1.03, 1.3, 6.15, 1.57, 2.9, 9.75, 6.99, 9.04, 1.12, 3.84, 6.3, 2.64, 7.63, 5.72, 5.21, 2.03, 8.56, 5.09, 6.67, 1.95, 7.86, 8.07, 5.22, 2.35, 2.82, 9.58, 4.57, 1.06, 6.46, 9.97, 9.35, 3.01, 3.85, 1.23, 8.0, 1.47, 1.25, 6.7, 8.37, 7.09, 1.13, 5.33, 7.42, 5.83, 2.09, 6.87, 5.92]; 0.000199999999999 1.999999999999e-16 0.000399999999998 0.000199999999999 1.99999999999e-16 1.9999999999e-16 1.9999999999e-16 0.000199999999999 1.9999999999e-16 0.000399999999998 1.9999999999e-16 0.0001999999999999 1.9999999999e-16 0.000999999999999 0.000399999999998 0.00079999999999999 0.00139999999999 0.001599999999999 $0.0007999999999996 \ 0.00179999999999991 \ 0.0015999999999992 \ 0.0013999999999999$

 $0.002399999999988\ 0.00179999999999991\ 0.0015999999999992\ 0.00239999999999988$ 0.001999999999999900003599999999999982 0.002999999999999853 0.0035999999999999820.0045999999999977 0.00619999999999999 0.0045999999999977 0.0057999999999999 $0.0035999999999982 \ 0.00579999999999972 \ 0.00699999999999655 \ 0.00679999999999967$ 0.005399999999973 0.0049999999999976 0.0061999999999999 0.010799999999999470.00779999999999615 0.00719999999999964 0.0063999999999968 0.01019999999999990.0063999999999968 0.00999999999999952 0.0127999999999936 0.010599999999999480.0087999999999957 0.01059999999999948 0.0071999999999964 0.010599999999999480.011399999999943 0.010399999999995 0.0157999999999922 0.0139999999999931 0.009999999999952 0.01279999999999936 0.0109999999999946 0.012999999999999370.014999999999927 0.01559999999999923 0.0165999999999917 0.013999999999999310.0135999999999933 0.01279999999999936 0.015399999999994 0.0133999999999999990.0165999999999917 0.01559999999999923 0.0113999999999943 0.0125999999999999380.0133999999999935 0.0111999999999944 0.0137999999999932 0.011399999999999430.0085999999999958 0.0113999999999943 0.0131999999999936 0.01159999999999440.008799999999997 0.007999999999999 0.007599999999999 0.01039999999999 $0.0069999999999655\ 0.00579999999999972\ 0.0045999999999977\ 0.0085999999999988$ 0.0067999999999967 0.00739999999999964 0.0057999999999972 0.005599999999999720.0061999999999999 0.00479999999999976 0.0055999999999972 0.003999999999999980.00379999999999813 0.0043999999999999999999999999986 0.0031999999999999840.001199999999994 0.00079999999999999 0.00059999999999 0.00099999999999990.0005999999999997 0.00039999999999999 0.001599999999999 0.00039999999999990.000999999999995 0.00059999999999997 0.000999999999995 0.000799999999999990.000999999999995 0.0007999999999999 0.00079999999999 0.0005999999999991.9999999999e-16 1.99999999999e-16 1.9999999999e-16 1.999999999e-16 1.99999999999e-16 1.99999999999-16 1.999999999999-16 1.9999999999-16 1.999999999-16 1.99999999999-16 1.99999999999999e-16 0.000199999999999999

f obiettivo: 593.07, Time: 5.2897608280181885, Status: optimal, Best bound: 593.07; f obiettivo: 593.070000, Time: 0.048880815505981445, Status: /, Best Bound: /

COSTI RANDOM, PESI ONE-PEAK, $\Delta = 10$, n=200, q=0.95

Istanza 57

200; 10; 0.950000; [4.46, 6.43, 9.05, 6.67, 1.37, 7.18, 4.36, 5.21, 3.48, 4.55, 3.16, 5.8, 1.95, 8.46, 5.4, 2.96, 2.49, 3.93, 4.79, 3.95, 3.42, 2.99, 7.08, 1.84, 5.95, 5.05, 1.51, 8.09, 2.68, 8.86, 3.09, 6.75, 9.17, 1.48, 1.08, 2.51, 6.64, 9.54, 6.04, 5.49, 7.9, 7.55, 7.54, 6.78, 4.29, 9.83, 6.76, 4.83, 8.35, 3.99, 5.1, 6.82, 1.71, 7.3, 2.26, 8.95, 8.16, 2.25, 3.07, 6.56, 4.97, 7.07, 8.98, 3.72, 3.24, 8.94, 6.17, 8.78, 5.55, 9.5, 7.73, 2.06, 4.21, 3.75, 4.4, 1.3, 6.74, 1.35, 7.69, 2.91, 6.63, 9.78, 7.74, 9.58, 1.44, 9.71, 5.72, 3.45, 5.92, 7.73, 9.92, 9.41, 4.83, 4.35, 8.41, 4.71, 6.36, 3.61, 7.8, 9.72, 9.49, 6.08, 2.9, 3.08, 2.58, 3.69, 7.14, 8.18, 8.23, 4.87, 4.43, 1.37, 6.62, 7.59, 3.69, 7.14, 8.18, 8.23, 4.87, 4.43, 1.37, 6.62, 7.59, 3.69, 7.14, 8.18, 8.28, 4.87, 4.43, 1.37, 6.62, 7.59, 3.69, 7.14, 8.18, 8.28, 4.87, 4.43, 1.37, 6.62, 7.59, 3.69, 7.14, 8.18, 8.28, 4.87, 4.43, 1.37, 6.62, 7.59, 3.69, 7.14, 8.18, 8.28, 4.87, 4.43, 1.37, 6.62, 7.59, 3.69, 7.14, 8.18, 8.28, 4.87, 4.43, 1.37, 6.62, 7.59, 3.69, 7.14, 8.18, 8.28, 4.87, 4.43, 1.37, 6.62, 7.59, 3.69, 7.14, 8.18, 8.28, 4.87, 4.43, 1.37, 6.62, 7.59, 3.69, 7.14, 8.18, 8.28, 4.87, 4.43, 1.37, 6.62, 7.59, 3.69, 7.14, 8.18, 8.28, 4.87, 4.43, 1.37, 6.62, 7.59, 3.69, 7.14, 8.18, 8.28, 4.87, 4.43, 1.37, 6.62, 7.59, 3.69, 7.14, 8.18, 8.28, 4.87, 4.43, 1.37, 6.62, 7.59, 3.69, 7.14, 8.18, 8.28, 4.87, 4.43, 1.37, 6.62, 7.59, 4.87, 4.48,9.38, 1.58, 7.06, 3.11, 1.95, 3.4, 9.72, 3.1, 5.3, 3.76, 6.36, 9.29, 8.62, 1.06, 6.93, 5.68, 7.81, 8.85, 1.68, 3.1, 5.74, 7.04, 9.93, 2.36, 1.72, 8.02, 3.08, 5.18, 1.18, 7.53, 7.21, 1.49, 1.25, 1.63, 10.0, 7.4, 5.08, 1.34, 9.8, 4.79, 7.69, 6.9, 6.55, 7.24, 3.55, 3.77, 6.96, 6.34, 6.12, 4.64, 4.54, 2.31, 5.19, 3.01, 3.28, 4.38, 9.15, 8.81, 6.96, 8.16, 1.5, 6.68, 8.85, 5.51, 3.14, 3.96, 7.59, 8.1, 3.88, 9.66, 4.33, 6.91, 1.88, 7.44, 5.79, 6.42, 2.93, 5.92, 1.3, 1.23, 4.79, 4.02, 4.04, 6.41, 1.59, 9.0]; 0.0001999999999993 1.9999999999999963e-16 1.9999999999983e-16 1.999999999999983e-16 1.9999999999983e-16 1.9999999999999999 1.9999999999983e-16 1.99999999999983e-16 1.9999999999983e-16 1.99999999999999999 1.9999999999983e-16 0.000199999999999983 1.99999999999983e-16 1.99999999999983e-16 1.9999999999983e-16 1.99999999999983e-16 0.00019999999999983 1.99999999999983e-16 1.9999999999983e-16 1.99999999999983e-16 0.00019999999999983 1.99999999999983e-16 1.9999999999983e-16 0.00019999999999983 0.0001999999999983 1.99999999999983e-16 0.0003999999999966 0.000199999999999983 0.0003999999999966 0.00039999999999660.0001999999999983 0.000199999999999983 0.0003999999999966 0.0007999999999999932 $0.0001999999999983\ 0.001199999999999997\ 0.0007999999999932\ 0.00099999999999913$ 0.002799999999976 0.00319999999999973 0.0035999999999999 0.00339999999999997080.0031999999999973 0.00559999999999952 0.00519999999999555 0.00559999999999952 $0.0055999999999952\ 0.00759999999999935\ 0.00699999999994\ 0.0083999999999928$ 0.008399999999928 0.0079999999999999 0.008599999999997 0.0109999999999990.0089999999999923 0.01119999999999904 0.0089999999999923 0.01359999999999883 $0.009799999999916\ 0.0111999999999904\ 0.014199999999988\ 0.0129999999999888$ 0.0135999999999883 0.014599999999999875 0.0135999999999883 0.014799999999998740.016399999999986 0.016799999999999857 0.01899999999999836 0.017199999999998540.015199999999987 0.01459999999999875 0.0155999999999867 0.01699999999998560.0147999999999874 0.019599999999999833 0.017399999999985 0.0107999999999999970.0169999999999856 0.010999999999999906 0.0157999999999866 0.014599999999998750.014199999999988 0.01779999999999847 0.0157999999999866 0.01599999999999860.0137999999999882 0.01499999999999871 0.01199999999999888 0.015399999999998690.01239999999999994 0.0091999999999992 0.0123999999999994 0.0097999999999999160.0109999999999906 0.00939999999999919 0.0113999999999903 0.010399999999999110.0089999999999923 0.0097999999999916 0.009999999999915 0.00679999999999415

f obiettivo: 524.45, Time: 4.3597612380981445, Status: optimal, Best bound: 524.45; f obiettivo: 530.620000, Time: 0.03360581398010254, Status: /, Best Bound: /

Istanza 58

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200; 10; 0.950000; [9.14, 7.93, 9.34, 4.96, 7.37, 4.47, 4.04, 5.71, 5.79, 6.85, 4.56, 4.9, 7.53, 8.37, 5.0, 2.7,
8.34, 7.41, 5.07, 6.33, 7.09, 1.52, 4.17, 3.21, 6.01, 9.89, 5.85, 2.34, 5.19, 7.71, 2.66, 2.47, 1.38, 5.11, 4.4,
4.66, 9.97, 8.87, 2.18, 9.05, 1.61, 7.41, 6.25, 6.02, 6.26, 6.83, 1.79, 1.91, 1.62, 5.94, 6.65, 4.63, 4.9, 5.26,
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5.78, 4.77, 5.57, 6.88, 3.16, 9.1, 9.64, 4.28, 5.16, 9.02, 8.97, 3.33, 3.94, 7.1, 5.84, 3.37, 1.79, 5.82, 9.38, 5.7,
7.09, 3.1, 4.12, 8.75, 3.12, 5.92, 5.43, 5.33, 2.85, 1.43, 4.23, 6.06, 1.74, 2.12, 6.92, 3.72, 3.44, 9.06, 8.23,
4.19, 4.98, 4.27, 8.84, 9.6, 10.0, 6.34, 8.13, 3.48, 1.26, 7.21, 3.45, 4.38, 9.03, 1.26, 6.97, 5.54, 4.3, 9.4, 9.17, 9.17, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9.18, 9
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5.52, 3.96, 1.85, 7.78, 3.75, 3.55, 3.42, 2.47, 7.44, 2.41, 7.92, 1.28, 9.81, 8.37, 3.58, 2.69, 1.03, 3.06, 9.61,
2.23, 5.73, 8.48, 4.77, 9.13, 7.53, 4.34, 3.55, 4.73, 7.24, 4.34, 6.9, 3.61, 5.16, 4.32, 8.74, 3.44, 1.74, 8.48,
3.81, 9.24, 3.78, 7.46, 2.25, 2.45, 8.45, 6.71, 4.7, 2.61]; 0.000199999999999874 1.999999999999871e-
16 1.99999999999871e-16 1.99999999999871e-16 1.99999999999871e-16
0.000199999999999874 1.999999999999871e-16 1.9999999999871e-16 1.99999999999999871e-16
1.99999999999871e-16 0.000199999999999874 0.000199999999999874
1.99999999999871e-16 0.00019999999999999874 1.99999999999871e-16 1.999999999999871e-16
0.00039999999999747 0.00019999999999874 0.000399999999999747
0.000399999999999747 0.000199999999999874 1.999999999999871e-16
0.00039999999999747 0.00119999999999999923 0.00039999999999747 0.00039999999999999747
0.00259999999999834 0.002399999999999846 0.002999999999981 0.00179999999999885
0.0027999999999982 0.0039999999999975 0.002999999999981 0.00279999999999982
0.0051999999999967 0.00659999999999958 0.0075999999999951 0.00619999999999961
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0.0077999999999995 0.009999999999999936 0.007799999999995 0.0099999999999999990.0107999999999931 0.00879999999999943 0.010399999999994 0.012199999999999930.012999999999918 0.00899999999999942 0.0129999999999918 0.011599999999999960.0135999999999914 0.01479999999999905 0.0095999999999938 0.011999999999999240.0153999999999902 0.0135999999999914 0.0121999999999923 0.010799999999999310.0147999999999905 0.01479999999999905 0.0133999999999915 0.01759999999999887 0.016399999999999997 0.0091999999999994 0.0115999999999926 0.0095999999999999380.0107999999999931 0.0119999999999994 0.0121999999999993 0.0125999999999990.007799999999995 0.009599999999999938 0.0099999999999936 0.008399999999999460.0115999999999926 0.0093999999999994 0.008399999999946 0.00839999999999460.0067999999999957 0.00759999999999951 0.0057999999999963 0.005399999999999660.0055999999999964 0.00439999999999972 0.0039999999999975 0.005599999999999999640.0041999999999973 0.004599999999997 0.004599999999997 0.00319999999999990.0035999999999977 0.003399999999999786 0.00319999999999999998 0.002199999999999860.00199999999999875 0.0021999999999986 0.0021999999999986 0.00239999999998460.00259999999999834 0.001399999999999991 0.002799999999982 0.00219999999999860.0005999999999962 0.00059999999999962 1.99999999999871e-16 0.000199999999999874 0.000399999999999747 0.000399999999999747 0.000399999999999747 $0.000199999999999874\ 0.0003999999999999747\ 0.000199999999999874\ 1.999999999999871e 16\, 0.000199999999999874\, 0.00019999999999999874\, 0.00059999999999962\, 1.999999999999871e-$ 16 1.999999999999871e-16 1.99999999999871e-16 0.000199999999999874

f obiettivo: 557.54, Time: 4.687167644500732, Status: optimal, Best bound: 557.54; f obiettivo: 558.550000, Time: 0.03889346122741699, Status: /, Best Bound: /

Istanza 59

200; 10; 0.950000; [8.77, 9.39, 4.34, 3.7, 1.37, 3.69, 5.5, 1.19, 7.63, 7.32, 9.96, 8.66, 4.6, 6.74, 2.0, 9.17, 7.8, 9.17, 3.49, 6.33, 9.51, 8.52, 4.48, 6.52, 7.82, 1.08, 7.8, 1.2, 8.35, 8.77, 2.97, 6.7, 2.65, 2.22, 3.01, 4.79, 9.07, 4.55, 7.08, 6.62, 3.1, 2.94, 3.64, 9.04, 4.93, 3.58, 2.64, 1.57, 3.19, 1.41, 9.79, 8.1, 7.72, 7.32, 9.28, 8.69, 1.39, 5.32, 1.63, 2.3, 1.59, 8.6, 9.34, 2.14, 8.18, 7.37, 7.31, 1.08, 5.66, 2.95, 7.07, 2.72, 8.9, 2.35, 9.64, 5.63, 7.66, 3.65, 1.47, 2.89, 5.73, 9.9, 2.71, 6.51, 7.59, 6.87, 4.67, 7.86, 7.76, 9.19, 3.26, 3.91, 5.05, 5.16, 3.78, 9.62, 2.16, 8.91, 5.67, 1.66, 3.81, 6.91, 6.61, 5.29, 2.66, 6.77, 1.17, 6.26, 3.14, 7.07, 7.3, 2.8, 2.62, 5.81, 2.83, 5.87, 4.76, 6.08, 5.39, 1.03, 1.42, 9.13, 2.1, 7.01, 8.82, 4.23, 9.25, 7.61, 6.0, 5.34, 4.66, 2.28, 2.3, 6.4, 7.07, 7.95, 8.79, 6.71, 3.59, 9.78, 1.17, 7.91, 1.55, 5.07, 3.51, 5.81, 3.04, 8.26, 1.15, 4.78, 6.75, 5.52, 9.0, 5.85, 9.17, 4.49, 1.81, 2.54, 9.08, 5.7, 4.93, 2.03, 7.01, 9.24, 4.87, 8.63, 5.08, 1.02, 2.67, 6.48, 8.63, 9.21, 5.01, 2.71, 4.33, 6.92, 1.73, 2.86, 2.06, 9.0, 3.34, 9.19, 7.97, 3.12, 3.05, 2.41, 4.59, 9.94, 4.05, 1.05, 4.36, 4.09, 5.86, 3.53, 9.92, 8.35, 7.79, 9.8, 6.51, 1.95]; 0.00019999999999998887 1.999999999999999886e-16

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1.99999999999886e-16 1.99999999999886e-16 1.99999999999886e-16 1.99999999999886e-16
1.99999999999886e-16 1.99999999999886e-16 1.99999999999886e-16 1.99999999999886e-16
1.99999999999886e-16 1.999999999999886e-16 1.99999999999886e-16 0.00019999999999887
1.99999999999886e-16 0.0001999999999999887 1.99999999999886e-16 1.999999999999886e-16
1.99999999999886e-16 0.000199999999999887 0.000199999999999887
0.00019999999999887 0.0005999999999999966 0.000199999999999887 0.00059999999999966
0.0005999999999966 0.0005999999999999966 0.0007999999999955 0.000399999999999774
0.00039999999999774 1.99999999999886e-16 0.0007999999999955 0.00039999999999774
0.00019999999999887 0.00119999999999932 0.001599999999991 0.00139999999999922
0.0007999999999955\ 0.000199999999999887\ 0.000999999999944\ 0.00219999999999876
0.0007999999999955 0.001999999999999888 0.00179999999999898 0.00119999999999999
0.00239999999999863 0.0027999999999999844 0.00279999999999844 0.00199999999999888
0.0039999999999775\ 0.00239999999999863\ 0.002999999999983\ 0.00339999999999807
0.0037999999999787 0.0035999999999999999999999999999775 0.00379999999999999787
0.005399999999997 0.003799999999999787 0.00659999999999963 0.00539999999999999
0.0065999999999963 0.0051999999999997 0.00759999999999575 0.0063999999999999964
0.0063999999999964 0.0079999999999955 0.0083999999999953 0.00759999999999575
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0.0121999999999931 0.00999999999999943 0.012199999999931 0.0111999999999997
0.010399999999994 0.01159999999999935 0.010399999999994 0.009999999999999943
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0.0141999999999992 0.01539999999999914 0.0155999999999913 0.01339999999999924
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0.0117999999999934 0.0139999999999999 0.017199999999999 0.0137999999999999
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0.004799999999973 0.0045999999999974 0.0049999999999715 0.0039999999999775
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200; 10; 0.950000; [6.12, 2.28, 3.84, 6.81, 8.74, 3.32, 1.89, 2.0, 5.19, 8.71, 3.78, 1.01, 9.73, 9.05, 7.17, 8.8, 7.45, 7.12, 7.32, 6.06, 2.37, 9.35, 9.67, 5.95, 1.08, 5.08, 5.67, 4.41, 8.66, 9.09, 7.01, 3.45, 4.05, 4.26, 2.12, 3.86, 2.59, 4.15, 7.63, 9.47, 9.64, 2.35, 8.31, 8.08, 1.73, 8.59, 6.87, 9.9, 6.04, 9.06, 4.69, 1.54, 6.42, 3.15, 9.1, 1.2, 1.49, 7.34, 4.13, 5.91, 9.17, 3.92, 6.5, 8.86, 1.5, 3.12, 3.92, 6.04, 8.63, 4.8, 6.07, 7.67, 5.29, 4.36, 6.71, 2.48, 7.39, 4.69, 9.3, 6.7, 1.08, 4.9, 9.73, 4.45, 7.76, 3.7, 4.46, 9.7, 7.69, 7.57, 2.95, 3.82, 9.53, 9.23, 4.01, 3.58, 1.12, 8.49, 9.57, 7.49, 8.44, 3.79, 7.75, 3.26, 7.68, 4.83, 5.25, 2.06, 7.64, 5.84, 6.53, 9.71, 9.77, 7.37, 4.72, 2.3, 3.82, 4.58, 1.54, 2.41, 7.07, 5.53, 4.9, 8.43, 7.5, 6.57, 9.71, 9.91, 6.75, 3.47, 5.01, 8.6, 2.06, 1.64, 5.05, 6.84, 1.6, 8.59, 1.75, 8.18, 8.33, 9.57, 5.38, 2.67, 6.09, 4.72, 1.62, 9.28, 4.02, 7.54, 5.34, 5.81, 9.85, 9.95, 4.0, 1.7, 5.07, 3.1, 2.24, 9.61, 3.13, 9.64, 7.07, 8.46, 5.77, 6.14, 8.05, 7.78, 1.03, 2.02, 9.21, 8.33, 3.47, 4.12, 3.31, 5.75, 1.98, 6.92, 8.44, 6.7, 2.39, 9.95, 7.19, 3.34, 2.24, 3.28, 6.41, 1.05, 1.17, 9.11, 7.89, 8.81, 1.43, 1.95, 8.63, 8.55, 4.16, 6.19, 1.63, 7.6]; 0.0001999999999991 1.999999999999998e-16 1.99999999999908e-16 1.99999999999908e-16 1.99999999999908e-16 0.000199999999999 0.0001999999999991 1.99999999999998e-16 0.0001999999999991 1.99999999999998e-16 $0.0001999999999991 \ 0.00019999999999991 \ 0.000199999999991 \ 1.99999999999998e-16$ $0.00059999999999972\ 0.000399999999999982\ 1.9999999999998e-16\ 0.0003999999999982$ 1.99999999999908e-16 0.00059999999999972 0.0005999999999972 1.99999999999998e-16 $0.0003999999999982\ 0.00059999999999972\ 0.0007999999999964\ 0.00099999999999955$ 0.000999999999955 0.00099999999999955 0.0011999999999945 0.00039999999999982 $0.002199999999999900.001599999999999927\ 0.0007999999999964\ 0.001799999999999917$ 0.002999999999986 0.003399999999999846 0.00319999999999854 0.0025999999999988 $0.0027999999999874\ 0.003199999999999854\ 0.0039999999999982\ 0.004999999999999776$ 0.0041999999999981 0.00459999999999999999999999999999999972 0.0029999999999999860.0057999999999974 0.0065999999999997 0.00739999999999665 0.005399999999999750.006399999999971 0.0085999999999999 0.009999999999955 0.006799999999999990.009199999999998 0.0091999999999998 0.00819999999999963 0.0075999999999999650.0105999999999951 0.00919999999999958 0.009399999999957 0.008399999999999610.009399999999957 0.01279999999999942 0.012999999999994 0.011799999999999460.0103999999999953 0.01019999999999954 0.0133999999999994 0.0125999999999999990.0101999999999954 0.01459999999999934 0.0119999999999945 0.012599999999999943 $0.015599999999993 \ 0.0113999999999948 \ 0.014399999999934 \ 0.013199999999994$ 0.0151999999999993 0.0123999999999944 0.0135999999999999 0.0155999999999999 $0.0167999999999923 \ 0.015399999999993 \ 0.015399999999999 \ 0.0141999999999995$ 0.0113999999999948 0.013999999999999936 0.0137999999999937 0.01079999999999990.0141999999999935 0.00979999999999955 0.0103999999999953 0.0129999999999990.0113999999999948 0.00919999999999958 0.011399999999948 0.012199999999999450.009399999999957 0.0119999999999945 0.0113999999999948 0.009399999999999570.0089999999999960.010399999999999530.0099999999999550.008399999999999961

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f obiettivo: 610.569999999999, Time: 5.6174139976501465, Status: optimal, Best bound: 610.569999999999; f obiettivo: 611.830000, Time: 0.047534942626953125, Status: /, Best Bound: /

COSTI RANDOM, PESI ONE-PEAK, $\Delta = 3$, n=400, q=0.95

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400; 3; 0.950000; [9.06, 6.46, 1.29, 2.93, 9.42, 5.13, 6.28, 4.46, 8.97, 2.5, 1.11, 4.94, 4.93, 6.36, 6.47, 4.08, 1.19, 5.41, 3.23, 7.89, 6.13, 8.88, 1.11, 4.7, 8.45, 6.38, 5.59, 2.01, 9.4, 3.45, 6.55, 8.3, 2.26, 6.13, 4.61, 6.18, 3.62, 9.92, 3.31, 9.17, 8.11, 4.1, 5.26, 2.65, 8.77, 4.16, 1.19, 4.67, 3.92, 9.97, 8.93, 6.42, 5.52, 8.37, 7.2, 2.63, 1.59, 2.04, 5.08, 2.66, 9.64, 9.72, 1.8, 3.66, 9.23, 1.65, 1.33, 9.21, 8.17, 6.91, 1.11, 7.98, 7.27, 7.72, 1.61, 1.45, 1.74, 9.48, 5.78, 8.87, 8.51, 9.2, 6.54, 8.86, 2.8, 9.0, 8.27, 4.8, 3.27, 8.33, 4.53, 2.28, 9.63, 3.76, 6.65, 7.13, 2.01, 1.67, 9.98, 1.3, 5.02, 1.62, 3.97, 2.54, 6.97, 9.73, 2.47, 5.14, 1.84, 1.35, 1.51, 5.28, 1.73, 7.06, 2.23, 3.52, 5.61, 6.19, 3.62, 7.13, 5.96, 2.13, 5.31, 8.92, 1.76, 3.37, 8.46, 1.33, 9.71, 9.03, 7.73, 7.51, 8.31, 3.2, 8.59, 1.01, 4.56, 9.62, 2.53, 9.04, 7.55, 6.55, 3.4, 5.02, 8.34, 8.27, 5.59, 5.23, 8.14, 7.96, 2.99, 2.84, 5.42, 4.85, 1.24, 4.22, 4.64, 9.56, 2.38, 3.82, 2.35, 6.43, 3.95, 9.85, 5.72, 5.12, 3.28, 3.84, 4.69, 8.66, 7.64, 6.42, 2.96, 3.14, 3.59, 6.15, 6.03, 5.78, 7.85, 1.91, 2.75, 5.54, 1.07, 7.83, 4.07, 4.21, 4.4, 3.15, 3.41, 4.26, 4.03, 3.68, 5.97, 2.18, 6.12, 2.11, 2.56, 5.88, 6.58, 2.93, 1.27, 1.07, 1.1, 5.61, 7.88, 6.48, 3.91, 3.01, 9.02, 3.13, 5.11, 7.28, 4.83, 3.51, 9.85, 2.14, 3.48, 7.34, 5.21, 3.96, 3.32, 4.06, 9.49, 8.8, 1.51, 6.16, 3.94, 6.33, 9.42, 6.0, 2.64, 6.32, 2.61, 5.45, 3.16, 5.87, 9.31, 8.62, 4.17, 5.46, 4.89, 1.67, 7.08, 7.95, 4.15, 6.3, 3.16, 9.0, 5.76, 4.93, 3.31, 6.47, 9.41, 4.56, 7.64, 6.66, 8.18, 7.39, 7.97, 8.46, 9.65, 8.02, 7.57, 6.95, 9.79, 4.8, 7.43, 7.12, 6.52, 9.92, 1.82, 9.91, 6.64, 9.3, 9.59, 6.94, 9.63, 9.7, 8.35, 5.23, 8.45, 7.0, 4.33, 7.57, 5.76, 8.84, 1.86, 1.51, 3.85, 3.03, 7.08, 6.71, 8.61, 4.72, 4.59, 7.11, 3.91, 6.3, 6.48, 3.58, 8.13, 9.4, 1.27, 7.06, 1.23, 4.03, 6.99, 6.29, 9.48, 1.07, 5.13, 9.22, 9.85, 5.8, 1.43, 4.78, 5.06, 7.44, 7.43, 4.11, 4.37, 2.56, 2.15, 8.42, 9.49, 2.29, 6.08, 2.57, 9.99, 2.44, 8.19, 8.78, 9.99, 4.92, 7.93, 9.21, 4.21, 7.54, 2.16, 9.11, 2.5, 3.23, 6.25, 6.21, 4.42, 8.13, 3.92, 3.84, 2.51, 5.91, 7.6, 4.8, 6.85, 1.79, 7.0, 8.71, 1.3, 2.77, 8.52, 4.13, 1.05, 9.61, 2.77, 7.36, 1.42, 2.24, 1.98, 3.72, 3.08, 6.24, 3.95, 1.21, 9.6, 7.03, 3.02, 3.25, 3.78, 5.27, 1.94, 2.79, 8.88, 3.59, 3.91, 1.24, 3.17, 6.8, 5.86, 8.9, 4.72, 9.98, 9.85, 7.11, 8.93, 7.17, 4.53, 3.05, 9.36, 8.27, 2.8, 2.35]; 0.00039999999999999476

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Istanza 63

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Istanza 64

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Istanza 65

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f obiettivo: 1239.22, Time: 110.60002827644348, Status: optimal, Best bound: 1239.22; f obiettivo: 1241.320000, Time: 0.508364200592041, Status: /, Best Bound: /

Istanza 70

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Istanza 71

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Istanza 72

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16 0.000199999999999676 1.99999999999677e-16 0.000199999999999676
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0.00799999999987 0.0073999999999881 0.0073999999999881 0.0073999999999881
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