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Elliptic Curve Digital Signature Algorithm

Curve: B-571

Hash Algorithm: SHA3-512

Message to be signed: "Example of ECDSA with B-571"

###

Signature Generation

H:

2695DD6B37A9C0136E027AEA62B731DEED7E1A96201C05D3E48A74E7AF0
AB295E0F4142133E9C7F614F2FB8033547CAF9E65F8C5F6CC5EDBD48C10
4EF7FC4E95

E:

2695DD6B37A9C0136E027AEA62B731DEED7E1A96201C05D3E48A74E7AF0
AB295E0F4142133E9C7F614F2FB8033547CAF9E65F8C5F6CC5EDBD48C10
4EF7FC4E95

K:

1062FF6D95C49AC610CB9AF9900D59C288669C3626306DB7EB7F119499B
A1D54CB6BE888758CAADA69952675CC0CD4999176879BC302A7E2A5118D
FC7D538DA114CCAC2BAF9AD08

K_{inv} :

28C3AE12BD7922B837FE05066136BB45EDA0337D39E31C3D4B9164C93F1
7FD7549471EB0385FCCEA8768DD6E5925ADF1D1888826FF6AECC48F3DB3
9905D46A644EB2F0C3A3DCBBD

R_x :

E17447E422A2C0085190354AC149210C1137A92C10F9B14D225E6510DA7
6B19EF44D39390DD9D808C9DFBAE67D9CF0E7BE79A9E72FA8FA1DFE89F4
3FB6D093A6CEB30E136EABA3

R_y :

50F8519E19285DEE649F58F05D4E20B60755744C49D1D9189ED1E203664
FC73E87C83D4308731934628CF61EED6B9A30A897A5BE8FAC187AE67360
B1D662D67F0DB04253DD5E98C

R:

E17447E422A2C0085190354AC149210C1137A92C10F9B14D225E6510DA7
6B19EF44D39390DD9D808C9DFBAE67D9CF0E7BE79A9E72FA8FA1DFE89F4
3FB6D093A6CEB30E136EABA3

D:

3CCE32BA00DC3A7EEFC9EB6F6CBFB9C5F0E57F532B7EE6826D4A75D0E75
6FD533900F2CEA8CCCC50EE22CE079398D371EC4A2EC45CC24B88760667
8E9C67453D0F5E768E9D752

S:

319B6441D2B79089C9797308A8F96EF92B9FA5708A4E7AC3896BF2B8FE9
714B95E59EB6007A3FC2A9D706695893F984191B995FD2216AA8A44F974
6954FA1F47176D2331F7D3679

Signature

R:

E17447E422A2C0085190354AC149210C1137A92C10F9B14D225E6510DA7
6B19EF44D39390DD9D808C9DFBAE67D9CF0E7BE79A9E72FA8FA1DFE89F4
3FB6D093A6CEB30E136EABA3

S:

319B6441D2B79089C9797308A8F96EF92B9FA5708A4E7AC3896BF2B8FE9
714B95E59EB6007A3FC2A9D706695893F984191B995FD2216AA8A44F974
6954FA1F47176D2331F7D3679

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==

Signature Verification

Q_x:

<310EAD2BEF3DDB84F9FC1777A7EE179FFCB77AAB497BDC00E290597A5F
CE306FE419D2F1F208E54850516526DB8E03B0519BEF60E3A3CC8198FBC
A8C469ACFE46AB70D5C31874F>

Q_y:

<373CE6EA68F55D1501D5203ACA03C5AB709A337A8E03B03838F47C0676
2065FBDD08A102A08C42FF1760145BE54D8606D326EA22A54DF034FAC30
988049820BEBA2B0AF9F6404B3>

H:

<2695DD6B37A9C0136E027AEA62B731DEED7E1A96201C05D3E48A74E7AF
0AB295E0F4142133E9C7F614F2FB8033547CAF9E65F8C5F6CC5EDBD48C1
04EF7FC4E95>

E:

<2695DD6B37A9C0136E027AEA62B731DEED7E1A96201C05D3E48A74E7AF
0AB295E0F4142133E9C7F614F2FB8033547CAF9E65F8C5F6CC5EDBD48C1
04EF7FC4E95>

Sinv:

<3065B3A1FDC7161ABD2487E3C45D0D7DAE9740B363CFA4A35D2FCE0D61
B9973350A67CA5830733DD9F9E55FC302ED456F49CC585A2B21BC35CD56
24C362AD78FE73B10BA6D71B12>

U:

<2AA0C89423AD0028A98B55C305D6A0038C8D5326347E9459B1409088E9
0D13F2B7D90D9C9A18656A4D6CED0F501E37476876C25E104A1BF40F7B6
6BCFB551B65A97F0A2B1EE8801>

V:

<11029B19CA5FA12F59AD0365CE1EA1122DDD8F3F2912C9084FC0AC3B97
0649F204849DF92565EC3CB7639653A1640FACC01D6DB71AF261F499F25
90F3E40700A2C59211D4F4BCDA>

Rprime.X:

<E17447E422A2C0085190354AC149210C1137A92C10F9B14D225E6510DA
76B19EF44D39390DD9D808C9DFBAE67D9CF0E7BE79A9E72FA8FA1DFE89F
43FB6D093A6CEB30E136EABA3>

Rprime.Y:

<50F8519E19285DEE649F58F05D4E20B60755744C49D1D9189ED1E20366
4FC73E87C83D4308731934628CF61EED6B9A30A897A5BE8FAC187AE6736
0B1D662D67F0DB04253DD5E98C>

Rprime:

<E17447E422A2C0085190354AC149210C1137A92C10F9B14D225E6510DA
76B19EF44D39390DD9D808C9DFBAE67D9CF0E7BE79A9E72FA8FA1DFE89F
43FB6D093A6CEB30E136EABA3>

Verification Passed!