```
test

Test vectors for Shabal (192 bits):
message:
    00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
    00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
    00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
    00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
hash:
    0F 70 6E CB 97 CF 4D CE 00 BF BB D2 FB 64 53 0C
    32 87 0C B4 48 39 73 0D

Test vectors for Shabal (192 bits):
message:
    61 62 63 64 65 66 67 68 69 6A 6B 6C 6D 6E 6F 70
    71 72 73 74 75 76 77 78 79 7A 2D 30 31 32 33 34
    35 36 37 38 39 2D 41 42 43 44 45 46 47 48 49 4A
    4B 4C 4D 4E 4F 50 51 52 53 54 55 56 57 58 59 5A
    2D 30 31 32 33 34 35 36 37 38 39 2D 61 62 63 64
    65 66 67 68 69 6A 6B 6C 6D 6E 6F 70 71 72 73 74
    75 76 77 78 79 7A
hash:
    69 0F AE 79 22 6D 95 76 0A E8 FD B4 F5 8C 05 37
    11 17 56 55 7D 30 7B 15

Test vectors for Shabal (224 bits):
message:
    00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
    00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
    00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
    00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
hash:
    99 DD A6 14 F9 07 D2 E8 81 76 18 F7 30 69 6F 32
    00 AE CA 8B 5F 85 F4 25 43 BA 20 31

Test vectors for Shabal (224 bits):
message:
    61 62 63 64 65 66 67 68 69 6A 6B 6C 6D 6E 6F 70
    71 72 73 74 75 76 77 78 79 7A 2D 30 31 32 33 34
    35 36 37 38 39 2D 41 42 43 44 45 46 47 48 49 4A
    4B 4C 4D 4E 4F 50 51 52 53 54 55 56 57 58 59 5A
    2D 30 31 32 33 34 35 36 37 38 39 2D 61 62 63 64
    65 66 67 68 69 6A 6B 6C 6D 6E 6F 70 71 72 73 74
    75 76 77 78 79 7A
hash:
    C7 D6 2D 8D 2A 34 74 B4 F4 A9 D1 1A 52 DB 3D 43
    5B F1 58 CF 45 4C 5D 56 1D 71 25 F5

Test vectors for Shabal (256 bits):
message:
    00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
    00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
    00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
    00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
hash:
    DA 8F 08 C0 2A 67 BA 9A 56 BD D0 79 8E 48 AE 07
    14 21 5E 09 3B 5B 85 06 49 A3 77 18 99 3F 54 A2

Test vectors for Shabal (256 bits):
message:
    61 62 63 64 65 66 67 68 69 6A 6B 6C 6D 6E 6F 70
    71 72 73 74 75 76 77 78 79 7A 2D 30 31 32 33 34
    35 36 37 38 39 2D 41 42 43 44 45 46 47 48 49 4A
    4B 4C 4D 4E 4F 50 51 52 53 54 55 56 57 58 59 5A
    2D 30 31 32 33 34 35 36 37 38 39 2D 61 62 63 64
    65 66 67 68 69 6A 6B 6C 6D 6E 6F 70 71 72 73 74
    75 76 77 78 79 7A
hash:
    B4 9F 34 BF 51 86 4C 30 53 3C C4 6C C2 54 2B DE
    C2 F9 6F D0 6F 5C 53 9A FF 6E AD 58 83 F7 32 7A
```

```
Test vectors for Shabal (384 bits):
message:
    00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
    00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
    00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
    00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
hash:
    9D DE 12 33 91 0D 85 DA 3A 5C 78 03 12 B1 11 C6
    FC CA 1B 5D D2 55 37 03 5E E0 8E 3B 4E 1E 25 15
    4F 72 6A 63 84 E5 A8 F0 AF EA AB 4A C4 C0 2F 12

Test vectors for Shabal (384 bits):
message:
    61 62 63 64 65 66 67 68 69 6A 6B 6C 6D 6E 6F 70
    71 72 73 74 75 76 77 78 79 7A 2D 30 31 32 33 34
    35 36 37 38 39 2D 41 42 43 44 45 46 47 48 49 4A
    4B 4C 4D 4E 4F 50 51 52 53 54 55 56 57 58 59 5A
    2D 30 31 32 33 34 35 36 37 38 39 2D 61 62 63 64
    65 66 67 68 69 6A 6B 6C 6D 6E 6F 70 71 72 73 74
    75 76 77 78 79 7A
hash:
    30 01 2C 0E 3E DC 46 0B D7 86 27 C2 C3 09 44 D2
    A1 89 66 9A FA 2D 7A 97 13 EF 2F 77 4C 44 74 A4
    3A F1 CB CE C5 FA B4 24 8C 08 73 F0 38 FB EB A0

Test vectors for Shabal (512 bits):
message:
    00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
    00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
    00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
    00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
hash:
    15 80 16 C6 C8 1F 3F 0A 52 D9 8D 68 ED 2F 9E 8E
    78 95 EF 23 CB A7 E2 BC 61 09 D8 A5 32 E6 C9 E6
    A6 A5 01 97 9F B8 37 F0 4E C4 C6 20 E7 31 79 DC
    82 AB B5 2B 32 CD AD B3 56 50 E2 9C 98 5E 30 22

Test vectors for Shabal (512 bits):
message:
    61 62 63 64 65 66 67 68 69 6A 6B 6C 6D 6E 6F 70
    71 72 73 74 75 76 77 78 79 7A 2D 30 31 32 33 34
    35 36 37 38 39 2D 41 42 43 44 45 46 47 48 49 4A
    4B 4C 4D 4E 4F 50 51 52 53 54 55 56 57 58 59 5A
    2D 30 31 32 33 34 35 36 37 38 39 2D 61 62 63 64
    65 66 67 68 69 6A 6B 6C 6D 6E 6F 70 71 72 73 74
    75 76 77 78 79 7A
hash:
    67 7E 6F 7F 12 D7 0A F0 B3 35 66 2F 59 B5 68 51
    F3 65 3E 66 64 7D 33 86 DF DA 01 43 25 4C C8 A5
    DB 3E 21 94 06 8C 6F 71 59 7D 7B 60 98 4D 22 B4
    7A 1F 60 D9 1C A8 DF CB 17 5D 65 B9 73 59 CE CF
>
```