Set up DHKE to generate a 16-bit key and the shared key could be successfully determined using Baby-Step Giant-Steps method almost instantaneously.

```
faith@faith-VirtualBox:~/50042/Lab 6$ python3 dhke_template.py
Generate P and alpha:
P: 38959
alpha: 13848
My private key is:  5524
Test other private key is:  9839
My public key is:  38629
Test other public key is:  22437
My shared key is:  8531
Test other shared key is:  8531
Length of key is 14 bits.
faith@faith-VirtualBox:~/50042/Lab 6$ python3 babygiant_template.py
Guess key 1: 8531
Guess key 2: 8531
Actual shared key : 8531
```

Set up DHKE to generate a 20-bit key and the shared key could be successfully determined using Baby-Step Giant-Steps method almost instantaneously.

```
faith@faith-VirtualBox:~/50042/Lab 6$ python3 dhke_template.py
Generate P and alpha:
P: 161471
alpha: 14651
My private key is:  81201
Test other private key is:  104024
My public key is:  46589
Test other public key is:  130627
My shared key is:  58149
Test other shared key is:  58149
Length of key is 16 bits.
faith@faith-VirtualBox:~/50042/Lab 6$ python3 babygiant_template.py
Guess key 1: 58149
Guess key 2: 58149
Actual shared key : 58149
```

Set up DHKE to generate a 24-bit key and the shared key could be successfully determined using Baby-Step Giant-Steps method almost instantaneously.

```
faith@faith-VirtualBox:~/50042/Lab 6$ python3 dhke_template.py
Generate P and alpha:
P: 13766737
alpha: 12063044
My private key is:  3225702
Test other private key is:  8970992
My public key is:  11715967
Test other public key is:  6526855
My shared key is:  12828261
Test other shared key is:  12828261
Length of key is 24 bits.
faith@faith-VirtualBox:~/50042/Lab 6$ python3 babygiant_template.py
Guess key 1: 12828261
Guess key 2: 12828261
Actual shared key : 12828261
```

Set up DHKE to generate a 28-bit key and the shared key could be successfully determined using Baby-Step Giant-Steps method after several minutes.

```
faith@faith-VirtualBox:~/50042/Lab 6$ python3 dhke_template.py
Generate P and alpha:
P: 258504767
alpha: 107697910
My private key is:  27453564
Test other private key is:  251383693
My public key is:  28594296
Test other public key is:  33928481
My shared key is:  240023748
Test other shared key is:  240023748
Length of key is 28 bits.
faith@faith-VirtualBox:~/50042/Lab 6$ python3 babygiant_template.py
Guess key 1: 240023748
Guess key 2: 240023748
Actual shared key : 240023748
```

We can conclude that as we increase the number of bits, the amount of time taken to determine the shared key using Baby-Step Giant Steps method increases. Based on online research, to avoid attack using Baby-Step Giant Steps method, the DHKE protocol key should be minimally 2048-bits.