

```
1  # Demonstrates defining a function with a return value
2
3
4  def main():
5      x = int(input("What's x? "))
6      print("x squared is", square(x))
7
8
9  def square(n):
10     return n * n
11
12
13  main()
```

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9  def square(n):
10     return n * n
11
12
13  if __name__ == "__main__":
14     main()
```

```
1  from calculator1 import square
2
3
4  def main():
5      test_square()
6
7
8  def test_square():
9      if square(2) != 4:
10         print("2 squared was not 4")
11         if square(3) != 9:
12             print("3 squared was not 9")
13
14
15  if __name__ == "__main__":
16      main()
```

```
1  # Demonstrates defining a function with a return value
2
3
4  def main():
5      x = int(input("What's x? "))
6      print("x squared is", square(x))
7
8
9  def square(n):
10     return n * n
11
12
13  if __name__ == "__main__":
14     main()
```

```
1  from calculator2 import square
2
3
4  def main():
5      test_square()
6
7
8  def test_square():
9      assert square(2) == 4
10     assert square(3) == 9
11
12
13  if __name__ == "__main__":
14     main()
```

```
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2
3
4  def main():
5      x = int(input("What's x? "))
6      print("x squared is", square(x))
7
8
9  def square(n):
10     return n * n
11
12
13  if __name__ == "__main__":
14     main()
```

```
1  from calculator3 import square
2
3
4  def main():
5      test_square()
6
7
8  def test_square():
9      try:
10         assert square(2) == 4
11     except AssertionError:
12         print("2 squared was not 4")
13     try:
14         assert square(3) == 9
15     except AssertionError:
16         print("3 squared was not 9")
17
18
19 if __name__ == "__main__":
20     main()
```

```
1  # Demonstrates defining a function with a return value
2
3
4  def main():
5      x = int(input("What's x? "))
6      print("x squared is", square(x))
7
8
9  def square(n):
10     return n * n
11
12
13  if __name__ == "__main__":
14     main()
```



```
1  from calculator4 import square
2
3
4  def main():
5      test_square()
6
7
8  def test_square():
9      try:
10         assert square(2) == 4
11     except AssertionError:
12         print("2 squared was not 4")
13     try:
14         assert square(3) == 9
15     except AssertionError:
16         print("3 squared was not 9")
17     try:
18         assert square(-2) == 4
19     except AssertionError:
20         print("-2 squared was not 4")
21     try:
22         assert square(-3) == 9
23     except AssertionError:
24         print("-3 squared was not 9")
25     try:
26         assert square(0) == 0
27     except AssertionError:
28         print("0 squared was not 0")
29
30
31 if __name__ == "__main__":
32     main()
```

```
1  # Tests a function with one function via pytest
2
3
4  def main():
5      x = int(input("What's x? "))
6      print("x squared is", square(x))
7
8
9  def square(n):
10     return n * n
11
12
13  if __name__ == "__main__":
14     main()
```

```
1  from calculator5 import square
2
3
4  def test_square():
5      assert square(2) == 4
6      assert square(3) == 9
7      assert square(-2) == 4
8      assert square(-3) == 9
9      assert square(0) == 0
```

```
1  # Tests a function with multiple functions via pytest
2
3
4  def main():
5      x = int(input("What's x? "))
6      print("x squared is", square(x))
7
8
9  def square(n):
10     return n * n
11
12
13  if __name__ == "__main__":
14     main()
```

```
1  from calculator6 import square
2
3
4  def test_positive():
5      assert square(1) == 1
6      assert square(2) == 4
7      assert square(3) == 9
8
9
10 def test_negative():
11     assert square(-1) == 1
12     assert square(-2) == 4
13     assert square(-3) == 9
14
15
16 def test_zero():
17     assert square(0) == 0
```

```
1  # Function to be tested
2
3
4  def main():
5      name = input("What's your name? ")
6      hello(name)
7
8
9  def hello(to="world"):
10     print("hello,", to)
11
12
13  if __name__ == "__main__":
14     main()
```

```
1  # Has function return a str instead
2
3
4  def main():
5      name = input("What's your name? ")
6      print(hello(name))
7
8
9  def hello(to="world"):
10     return f"hello, {to}"
11
12
13  if __name__ == "__main__":
14     main()
```

```
1  from hello1 import hello
2
3
4  def test_default():
5      assert hello() == "hello, world"
6
7
8  def test_argument():
9      assert hello("you") == "hello, you"
```

```
1  from hello1 import hello
2
3
4  def test_default():
5      assert hello() == "hello, world"
6
7
8  def test_argument():
9      assert hello("you") == "hello, you"
```

