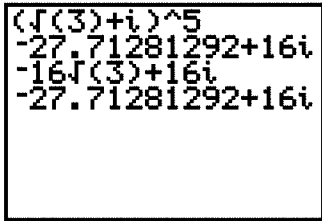


$$\boxed{49} \quad (\sqrt{3} + i)^5 = (2(\cos 30^\circ + i \sin 30^\circ))^5 = 2^5(\cos(5 \cdot 30^\circ) + i \sin(5 \cdot 30^\circ)) = 32(\cos 150^\circ + i \sin 150^\circ) = -16\sqrt{3} + 16i$$

This result is verified with the calculator in *Figure 49*.



```
(sqrt(3)+i)^5
-27.71281292+16i
-16sqrt(3)+16i
-27.71281292+16i
```

*Figure 49*