

if cube < 0:

guess = -guess

print('cube root of' + str(cube) + ' is ' + str(guess))

Approximate Solution

- good enough solution
- start with a good guess and increment by some small value
- keep guessing if $|guess^3 - cube| \geq \epsilon$ for some small ϵ
- decreasing increment size \rightarrow slower program
- increase ϵ \rightarrow less accurate answer

Code:

```
>>> cube = 27
>>> epsilon = 0.01
>>> guess = 0.0
>>> increment = 0.0001
>>> num_guess = 0
>>> while abs(guess**3 - cube) >= epsilon and
    guess <= cube:
    guess += increment
    num_guess += 1
>>> print('num_guess =', num_guess)
>>> if abs(guess**3 - cube) >= epsilon:
    print('Failing on cube root of,' cube)
else:
    print(guess, 'is close to the cube root of,' cube)
```