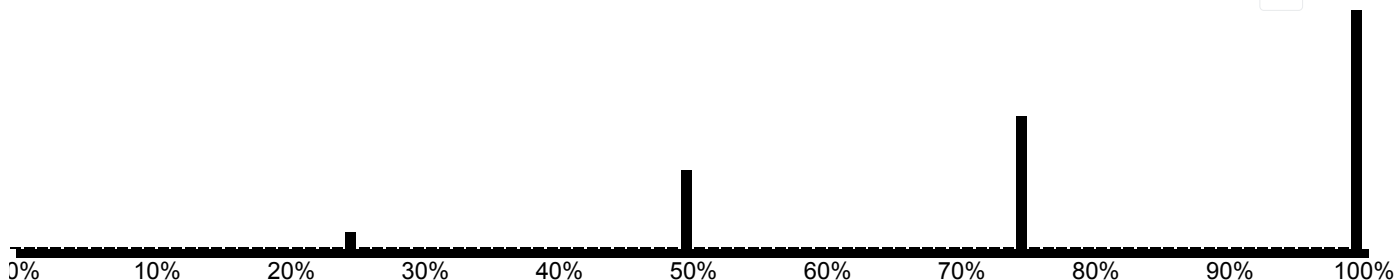


Quiz Summary

Average Score High Score Low Score Standard Deviation Average Time

82% 100% 25% 0.86

Section Filter ▾



Question Breakdown

Attempts: 60 out of 60

The equation:

$$ax^2 + bx + c = 0$$

has roots given by the quadratic equation:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \equiv \frac{-b \pm D}{2a}$$

$D < 0$, which of the following is most correct?

- The equation has a single solution. 0 %
 - The equation has two real solutions. 3 respondents 5 %
 - The equation has two complex solutions. 55 respondents 92 % ✓
 - The equation has no solution. 2 respondents 3 %
- 92% answered correctly

Attempts: 60 out of 60

When doing object oriented programming, Python allows one to add variables to objects *after* the objects have been created.

- `true` 51 respondents 85 % ✓
 - `false` 9 respondents 15 %
- 85% answered correctly

Attempts: 60 out of 60

When performing a numerical differentiation using the formula

$$f'(x) = \lim_{h \rightarrow 0} \frac{f(x + \frac{h}{2}) - f(x - \frac{h}{2})}{h}$$

there is, ε_{app} , caused by ignoring higher order terms in our approximation.

Generally, what happens to this error as h gets smaller?

- It stays the same. 0 %
- 85% answered correctly

It gets smaller. 51 respondents 85 % ✓

It gets larger. 9 respondents 15 %

Attempts: 60 out of 60

For the formula in the previous problem, there is also a round-off error, ε_{ro} , due to the finite precision of floating point numbers.

What happens to this error as h gets smaller?

remains the same. 13 respondents 22 %

67% answered correctly

It gets smaller. 7 respondents 12 %

It gets larger. 40 respondents 67 % ✓

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