

# Lesson 93: AP Prep #2 (W32D2)

Balboa High School

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# Do Now

Work on SelfDivisor, a FRQ from the 2007 exam.

- Download the problem [here](#).
- Develop a written solution now.

Students will work on problems in preparation for the AP exam.

# An Approach to FRQs

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- 4 **Assemble smaller pieces into a complete answer,** including loops and their stopping conditions.
- 5 **Test your solution using a few test cases.** Be sure to include special cases that you may have been told about in the description. Double-check incrementers, stopping conditions, etc.

# Approach to SelfDivisor

Did you understand the following?

- Every digit will need to be tested as a factor of the whole original #.
- Any # with a zero digit is automatically not a SD.

# Approach to SelfDivisor

Sensible subtasks:

- Getting the last digit from a number
- Shrinking a number by trimming the last digit
- Testing whether a number evenly divides another

# Approach to SelfDivisor

## Overarching Considerations:

- What actions need to be repeated? (Loop!)
- How do we stop chopping digits off of a #?
- We're returning T/F; do we return...
  - F (i.e., not a self divisor) by default, and T if we pass all tests, OR
  - T (i.e., is a self divisor) by default, and F if we didn't pass all tests?

# Scoring SelfDivisor

Let's have a look at the [scoring guide](#) so you can score your work.

# Solution to SelfDivisor

Let's go over a solution...

# Min/Max Problems

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- It's common that you'll be asked to work with a set of objects and to identify which object has a minimum or maximum value for some field.
- Let's start simple. Consider `int[] nums`, which has these values:

```
int[] nums = { 8, 0, 1, 2, 5, 9, 3 };
```

Write a program that inspects `nums` and outputs the following:

- **value** of max element
- **index** of max element

- Visit the [online scoring app](#) to see the class' statistics.
- Let's begin going over [the questions](#)<sup>1</sup> that will help us most (i.e., the most-missed ones).

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<sup>1</sup>Sorry, teacher link only!

Work on DonationDrive, a simulated min/max FRQ.

- The problem description is [here](#).
- Submit your solution online.