▾ Review

- POLL: mystery 1

- POLL: mystery 2

- *write Python code to compute a lower bound on hours I spent watching Fellowship of the Ring (2 hours 58 minutes) when it came out on VHS (I watched it once per day for a week), the final result should be assigned to a variable*

▾ Problem: what icon to display in weather app?

- ▾ Simplified problem: difference between current and "hot" temperature (i.e., should the app show the current temperature in red)

  - ▾ **calculate difference**

    - `difference = hot_temp - cur_temp_F`

  - **print (with context)**

  - ▾ **compare to one-line version**

    - `print("difference between hot and current temp in Celsius:",` `(80 - 32) / 9 * 5 - get_cur_temp())`

  - ▾ **comments**

    - any line that starts with a # is a *comment*

    - ignored by Python, useful for explaining and documenting your code

▾ Python Standard Library

- https://docs.python.org/3/library/index.html

- ▼ Some things are built-in
  - round function
  - ▼ call a function with its name and parentheses
    - round(10.123, 1) # returns 10.1
- Made up of *modules* which are made available by *importing them*
- ▼ example
  - ```
    import math
    print(math.sqrt(100)) # prints 10
    print(math.sqrt(-100)) # causes ValueError since sqrt doesn't know
    how to handle negative numbers
    ```
  - Note how we access `sqrt` by writing `<module name>.sqrt`, this is how modules work in general
- ▼ Variation on import
  - `from math import sqrt`
  - lets us just write `sqrt` instead of `math.sqrt`

Practice

- you have a variable change that contains the amount of change need in cents
- write Python code to compute how many quarters, dimes, nickels, and pennies are required
- ▼ what if change is a decimal number for the amount of change in dollars

- write code to compute how many 20s, 10s, 5s, 1s, and various coins are needed