

Lesson 78: Picture Lab #3 (W26D1)

Balboa High School

Michael Ferraro

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- Have your solutions to the A5 HW exercises ready to be checked. Uncomment calls to tester methods for the following Picture class methods so that the resulting images can be seen.
 - `keepOnlyBlue()` (2pts)
 - `negate()` (2pts)
 - `grayscale()` (2pts)
- Read §A6 (pp14-15) in the [student manual](#).

Aim

Students will gain more experience with 2D arrays and learn about digital images via the College Board's *Picture Lab*.

Solutions to the A5 Exercises

Let's go over the solutions to §A5: [teacher-only link](#).

A6: Mirroring Pictures

- Join a partner. (Odd number of students? One group of 3 is OK.)
- Work on exercises 1-3 on pp15-16. For exercise 2, **use scratch paper** to plan out how to match an upper-half pixel and the corresponding lower-half pixel. Work as a team!

A6: Mirroring Pictures

Let's go over the solutions to §A6: [Solutions](#).

A7: Mirroring Part of a Picture

- Return to your workstation and work individually.
- Read §A7 (pp17-18).
- Answer questions 1-2 on p18, recording your answers on scratch paper or in a text editor.

A7: Mirroring Part of a Picture

Solutions to questions 1-2 (p18):

| | |
|------|-----|
| A7Q1 | 90 |
| A7Q2 | 112 |

A7: Mirroring Part of a Picture

- Work on exercises 1, 3, & 2 on p18 — in that order!
- Hints for exercises 3 and 2:
 - Consult before and after pictures [here](#).
 - Use the `PictureExplorer` to find starting/stopping row and column values when mirroring a partial image over a vertical or horizontal line.
 - Note that the temple example mirrored a partial image over a vertical line, similar to what's needed for exercise 3.
- Done early? Work on exercise 4 on p16.

- Finish exercises 1, 3, & 2 (p18) in §A7
- Due next class