

Unit 6 Review

Unit 6: Similarity • Day 7 of unit • Review before assessment

At a Glance

Pacing: Narrative Arc opening (~3 min) • Navigation instrument self-assessment + practice (~65 min) • Closing: nav instrument update + assessment preview (~7 min)

Materials: CYU 6.6 problem set (one per student) • Navigation instruments • Boards and markers for opening only • Devices for Desmos activity (optional)

Nav instrument rows active: All five rows — students self-direct using honest self-assessment

THE NARRATIVE ARC — OPEN WITH THIS

This is the most important part of this lesson. Take a few minutes at the start of class before any practice begins.

 **Narrative Arc** — The arc of Unit 6 — say this before practice begins

“We began this unit with a flashlight and a cardboard triangle on the floor. You measured shadows, computed ratios, and noticed that something was staying the same even as the distances changed. You didn’t have a name for it yet.”

“By Lesson 6.2 you had a name — dilation — and a definition. By Lesson 6.3 you had shortcuts. You could prove similarity from two angles, or from proportional sides, without checking all six conditions.”

“In Lesson 6.4 you took those shortcuts outside. You measured something you couldn’t touch. You derived a law of physics — the law of reflection — as a consequence of similar triangles.”

“In Lesson 6.5 you discovered that scaling doesn’t treat length, area, and volume equally. And that fact alone explains why elephants have large ears, why insects have size limits, and why nature cannot simply scale things up.”

“Today you practice. The assessment is coming. But before you open the problem set, take a moment to notice the shape of what we’ve done: we started with a question about what stays the same under scaling, and ended with constraints on what can exist in the biological world. That is what geometry does.”

How students should use this

Students begin at their honest navigation instrument level on each row. A student at Intermediate on Row 3 starts at Q8, not Q7. More problems than most students can finish is intentional — the set is complete for the range of the unit.

CLOSING — NAVIGATION INSTRUMENT UPDATE AND ASSESSMENT PREVIEW (~7 MIN)

- Ask students to mark their navigation instrument for any problems attempted today.
- Name which rows and levels appear on the assessment.
- Ask: ‘Where do you feel solid? Where do you still have questions? If you have time tonight, which row would you revisit?’