

## **STANDARDS AND PRACTICE**

By Rachael Carnes

### **CHARACTERS**

Aristarchus of Samos	An astronomer, she presages heliocentricity
Cleanthes	A boxer, she carries water to earn extra cash

### **ARISTARCHUS'S LAB — ATHENS**

**230 B.C.**

STANDARDS AND PRACTICE

*Lights up on ARISTARCHUS, wearing a lab coat, safety goggles, a mask and latex gloves. CLEANTHES enters.*

ARISTARCHUS

*(Taking off mask.)* Oh good, you're here!

CLEANTHES

I'm here for your books.

ARISTARCHUS

*(Taking off goggles.)* Are you my new intern?

CLEANTHES

Maybe you didn't hear me —

ARISTARCHUS

Stand over here, please?

CLEANTHES

Aristarchus of Samos, you're to be indicted for impiety!

ARISTARCHUS

I'm so relieved to have another person to help me with my coordinates —

CLEANTHES

You put into motion the hearth of the universe!

ARISTARCHUS

I'll be the sun and you be the moon — Here, hold this string.

CLEANTHES

I can't be the moon!

ARISTARCHUS

Of course — You're right! I can't be the *sun*. Here — I'll tie the string to this chair — That makes more sense, doesn't it?

CLEANTHES

At the heart of the universe — standards and wishes!

ARISTARCHUS

I've observed during a lunar eclipse that Earth's shadow —

CLEANTHES

Just obey.

STANDARDS AND PRACTICE

ARISTARCHUS

Does this work? The angles? Can you see it? I still can't quite —

CLEANTHES

The universe is a living entity — it has *feelings*.

ARISTARCHUS

The universe is many times greater than the 'universe' just mentioned.

CLEANTHES

I'm here for any papers that say the sun is fastened securely — We just —

ARISTARCHUS

Taking shape! (*They've made a big triangle with the string.*) Look at it! Look at *us*.

CLEANTHES

You say the earth revolves about the sun in some kind of — circle?

ARISTARCHUS

Why is everything spinning? (*Holding the string, she moves in a circle.*) And why is it spinning in the same direction? Counter-clockwise?

CLEANTHES

What is a clock and how can it move counter?

ARISTARCHUS

Have I shown you my sundial? It's a flat plate and a —

CLEANTHES

Where is your sphere of fixed stars now? I cannot see them!

ARISTARCHUS

We're indoors, for starters, and it is day — but they're still here. Okay stop — (*Gets out animal skin and paints.*) After this diagram, I'll show you my massive swinging bob —

CLEANTHES

I'm not going to look at your massive swinging bob!

ARISTARCHUS

You don't like the word "bob"? Does seem sort of pedantic.

CLEANTHES

Your sundials and clocks and unseen stars have to go —

ARISTARCHUS

Where will you take them?

STANDARDS AND PRACTICE

CLEANTHES

I've got orders. The moon shines by Zeus —

ARISTARCHUS

The moon shines by reflected sunlight —

CLEANTHES

Zeus is the universe's vivifying ether!

ARISTARCHUS

You use that big word but do you know what it means?

CLEANTHES

Zeus! —

ARISTARCHUS

Please hold still!

CLEANTHES

Zeus! The all-bountiful whom darkness shrouds —

ARISTARCHUS

I'm trying to paint on animal skin! — Rather tricky!

CLEANTHES

Zeus! — Whose lightning lightens in the thunder-clouds!

ARISTARCHUS

Have you ever rubbed your feet across carpet and then touched a metal door handle?  
Lightning works the same —

CLEANTHES

We save the children from error's deadly sway!

ARISTARCHUS

The sun's the central fire —

CLEANTHES

We turn the darkness from their souls!

ARISTARCHUS

Okay, let's start with the premise that during a half-moon — the moon forms a right triangle with the Sun and Earth — Like you and me.

CLEANTHES

But the stars are Zeus and his wanderers — Just peeping!

STANDARDS AND PRACTICE

ARISTARCHUS

Peeping? By observing the angle —

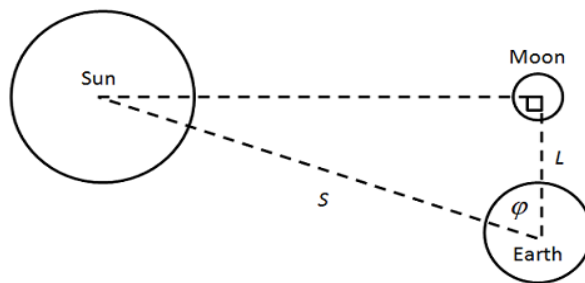
CLEANTHES

Evening star — Light-bringer — Our rulers! They're watching us!

ARISTARCHUS

The ratio of the distances to the Sun and Moon could be deduced —

*ARISTARCHUS shows her diagram:*



ARISTARCHUS (CON'T)

See?

CLEANTHES

But the sun comes up every day! (*Dropping string.*) Don't confuse me —

ARISTARCHUS

(*Drawing on her hand with her finger.*) From trigonometry we can calculate —

CLEANTHES

Who by your just decree controls all — Hail, Zeus!

ARISTARCHUS

It's just — trigonometric functions haven't been invented yet —

CLEANTHES

Ergonomic? Tragicomic?

ARISTARCHUS

I still posit that the sun is somewhere between 18 and 20 times greater than the distance to the Moon. Like you to me —

CLEANTHES

Zeus! One word through all things everlastingly!

STANDARDS AND PRACTICE

ARISTARCHUS

If only I had an optical instrument designed to make distant objects appear nearer!

CLEANTHES

One word — whose voice — Alas! The wicked spurn!

ARISTARCHUS

If horses could draw — Zeus would be a horse!

CLEANTHES

Clean up this string! Help me carry these papers!

ARISTARCHUS

Is it true Zeus isn't funding research related to climate change?

CLEANTHES

Because there is a "smallest" number — We've decided.

ARISTARCHUS

And yet there is a number smaller —

CLEANTHES

Zeus says you can't use that word!

ARISTARCHUS

The word 'smaller'?

CLEANTHES

And bigger — Or data — control group — hypothesis — validity

ARISTARCHUS

Once a contradiction has been asserted —

CLEANTHES

*(Reading from a scroll)* By decree: "Vulnerable" — "entitlement" —

ARISTARCHUS

The principle of explosion!

CLEANTHES

We know that "All lemons are yellow" as it is defined to be true —

ARISTARCHUS

But Zeus says "All lemons are yellow" *and* "Not all lemons are yellow" —

STANDARDS AND PRACTICE

CLEANTHES

Both are true!

ARISTARCHUS

If that is the case — anything can be proven — Zeus can say there are unicorns!

CLEANTHES

Unicorns — That reminds me, where was I? (*Reading*) “diversity” — “transgender”

ARISTARCHUS

Can you play cat’s cradle? — I’ll show you. I’ll cut a piece like this, tie the knot. (*Looping the string over each hand, running between the thumb and forefinger and behind the palms.*) There — I’ve started it. Do you know what to do now?

CLEANTHES

(*Looping the string once around ARISTARCHUS’ palms.*) I learned it as a boy!

ARISTARCHUS

(*Using each middle finger to hook the string that runs across each opposing palm.*) If “Not all lemons are yellow” — and this is also defined to be true — unicorns must exist — otherwise statement two would be false?

*Now there are two X figures on each side. CLEANTHES comes in from each side, pinches the two X figures with her thumb and forefinger, pulls the string outward, dips under and comes back up through the center, so that the string ends up on her thumb and forefinger.*

CLEANTHES

You also can’t say “fetus”, “evidence-based” or “science-based” —

*ARISTARCHUS pinches the two X figures from above, then pulls the string outward, dipping down under and coming back up through with the string.*

ARISTARCHUS

The existence of a contradiction in a well-defined system of thought is disastrous —

CLEANTHES

(*Using her pinkies to hook the two inner strings.*) I’m going to need that diagram.

*CLEANTHES pulls the two inner strings away from her and hooks the furthest string, pulling it toward her so she forms a diamond. She pulls her hands out.*

STANDARDS AND PRACTICE

CLEANTHES

I'm taking this string as evidence.

ARISTARCHUS

You trivialize truth and falsity —

CLEANTHES

We're appealing to intuition —

ARISTARCHUS

*(Takes two mirrors out of her pocket.)* An infinite sequence of receding images —

CLEANTHES

A fun house.

ARISTARCHUS

*(Puts mirrors on either side of CLEANTHES' head.)* An infinite regression —

CLEANTHES

What causes these actions?

ARISTARCHUS

The chicken or the egg?

CLEANTHES

A unique being! — Concerning causation — contingency — the universe!

ARISTARCHUS

*(Puts away the mirrors.)* A thing defined in terms of itself — Are you immovable?

CLEANTHES

The only change is place — the only place is motion.

ARISTARCHUS

You pull yourself — and the horse you're sitting on — out of the mire by your own hair.

CLEANTHES

Zeus says No loop! Zeus says No references!

ARISTARCHUS

You keep playing the same way —

CLEANTHES

Cat's cradle! A simple sequence game — Delightful!



STANDARDS AND PRACTICE

ARISTARCHUS

Good ol' knucklebones!

CLEANTHES

Oh, and chariot races! And juggling. And I like marbles, too — And dice!

ARISTARCHUS

Great, let's have a trilemma — (*Squatting over three upside-down cups, one containing a small orange, which she shows.*) Through or by means of one another — You can be Fast, you can be Good, you can be Cheap — Pick two.

CLEANTHES

I am honest and intelligent! If you lose — Zeus says —

ARISTARCHUS

You lose — I keep my books —

CLEANTHES

You lose — I keep the world.

ARISTARCHUS

(*Moving the cups*) The world is not exactly round, but resembles in shape a flattened orange — and it turns on its axis once in twenty-four hours.

CLEANTHES

I know it don't turn 'round, for if it did we'd be all tumbled off —

ARISTARCHUS

And as to —

CLEANTHES

Anyone can see it's a turtle —

ARISTARCHUS

A turtle?

CLEANTHES

standing on a turtle!

ARISTARCHUS

Standing on a turtle!

CLEANTHES

Turtle Lunatics — Turtle Liars — Turtle Lords! Strings passed between —

STANDARDS AND PRACTICE

ARISTARCHUS

But upon what does the turtle stand?

CLEANTHES

Why, on another, to be sure!

ARISTARCHUS

A bigger one!

CLEANTHES!

Pass it between you —

ARISTARCHUS

But what supports the last turtle?

*He stops moving the cups, gesturing for CLEANTHES to choose which cup holds the orange.*

CLEANTHES

If you lie —

ARISTARCHUS

That's a breach of oath?

CLEANTHES

Sin of perjury.

ARISTARCHUS

Coerced confessions are inadmissible —

CLEANTHES

Tell the truth —

ARISTARCHUS

I see three doorways —

CLEANTHES

And you expose yourself!

ARISTARCHUS

Run all out with him — Or run far away from him — Or do both while doing neither —

CLEANTHES

A helpless claim!

STANDARDS AND PRACTICE

ARISTARCHUS

Door One is full-throated support for the unpopular —

CLEANTHES

Or say nothing — and you're in contempt!

ARISTARCHUS

Door Two is to run away —

CLEANTHES

Quick note — We'd like you to replace "Evidence" with "Hearsay" and "Science" with "Ignorance." — Hardly matters since you'll be in prison.

ARISTARCHUS

Door Three is to ditch him — but keep his agenda —

CLEANTHES

You know — Just a little *spin*.

ARISTARCHUS

The color of the paper used to make the paper airplane —

CLEANTHES

And what do you choose among?

ARISTARCHUS

The Sun — The Moon — The Earth.

CLEANTHES

Zeus hates you.

ARISTARCHUS

Your brain's an embryo —

CLEANTHES

How feeble you are — How weak — *Flaccid*.

*Pointing to the cup that holds the orange, which  
ARISTARCHUS unveils, defeated.*

CLEANTHES (CON'T)

See? It's turtles all the way down!