

The Sand Reckoner

A Drama in Eight Scenes

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Author's Note

Although the works of Archimedes will survive as long as the earth endures, his life is erased. We know he died in 212 B.C. at about the age of seventy-five, from which we infer that he was born circa 287 B.C. According to Plutarch, writing in the first century A.D., Archimedes was related to King Hieron of Syracuse and was largely responsible for the city's defenses. Virtually nothing else is known. I have given him a wife, though there is no historical record of either wife or children.

Eratosthenes, the chief Librarian of Alexandria, was a friend of Archimedes and regarded by him as an equal. I have put Eratosthenes in Syracuse at the time of the play, but this is almost certainly counterfactual.

The remaining history is compressed in space and time for dramatic purposes but otherwise accurate at the sparse level of Plutarch, Tzetzes, the Oxford Classical Dictionary and various accounts for the general reader. Specialists will undoubtedly find many errors. (Yes, I am aware that the Greeks did not use the zero.) The title *Sand Reckoner* comes from one of Archimedes' own works in which he estimates the number of sand grains needed to fill the "universe." As I use it the term also connotes one who reckons in the sand. Any resemblance of my characters to their historical counterparts is purely coincidental, but then again, we'll never know.

Cast

Archimedes--The greatest mathematician of antiquity and generally considered, along with Newton and Gauss, as one of the three greatest of all time. Over seventy at the time of this play.

Hieron II--Tyrant of Syracuse. Almost ninety.

Hieronymous--His grandson. A teenager. (This role may be played by a woman.)

Eratosthenes--Also a mathematician. Chief Librarian of the Great Library at Alexandria, he is sometimes called "Beta," meaning "all rounder" or the best in each subject after the leading specialist. About ten years younger than Archimedes.

Galatea--Wife of Archimedes.

Chorus of Citizens

Various guards, messengers, envoys, etcetera.

Scene I

Downstage, left: King HIERON is seated upon a throne. At his feet is seated his grandson HIERONYMOUS. Upstage: A screen behind which is seen the silhouette of an executioner's block. As the curtain rises, a man is being dragged, struggling, upstage to the block by two GUARDS. He is forced to kneel, an axe is raised. As it falls, the screen is blacked out and a light opens on the apron, stage right.

Enter ARCHIMEDES. He is absolutely naked, dripping wet. He holds a golden wreath in his hand and stares at it for a long time.

ARCHIMEDES: Eureka.

HIERON: Ach, Archimedes, shake off those glistening shards of doubt
that adorn your moistened pate.

Your bathtime discovery shall remain to outshine all other
diadems on your crown.

ARCHIMEDES: On yours, Sire, not mine.

(He wraps a towel around his waist, takes crown to
HIERON and attempts to put it on his head.)

HIERON (refusing):

No, a votive offering to Zeus,
That fraudulent goldsmith defiled it.

I'll order another cast, pure gold,

Whose warmth will melt the stern god's heart.

ARCHIMEDES: Why bother? The sacrifice's been made.

HIERON (laughing): Your mood is testy, my kinsman of the lofty brow.

ARCHIMEDES: Had I but known, Hieron, that the smith's fondness for gold
would cause him to lose his head so quickly--

HIERON: --You would not have devised a method to expose his larceny?

Strange.

The spider, victim of instinct, spins her web blindly,
not knowing come the morn' whether she will have trapped a
meal or starve.

Archimedes, with powers of reason said more divine than
mortal, spins blinding tales.

Unravel the thread from your dazzled eyes with godlike
reason--and listen.

I suspect a fraud, silver mixed with gold.

I seek your counsel; more than counsel you give:

A new weapon against crime, with applications broad.

Did you expect it to gather dust, lie inert?

ARCHIMEDES: I...

HIERON: Your web was spun and the culprit snagged. Do you deny the
punishment was just?

ARCHIMEDES: No, upon reflection I see that you are right. Not so noble

as Jason's, this smith's fleece of gold.

Yet, if silver resulted in a beheading, would brass have

seen him drawn and quartered?

HIERON: Certainly. And tin would have fed him to the birds....

But let us turn to important matters.

The defenses of Syracuse lie neglected.

She is easy prey to the beast of Carthage.

I would like you, Archimedes, to strengthen her.

Fortify the ramparts, invent new engines of war.

Surround her by the shield of Achilles.

ARCHIMEDES: You wish to make her invulnerable to attack?

HIERON: Simply put.

ARCHIMEDES: Achilles' shield, as I recall, did not protect his heel.

HIERON: Nor his tongue.

ARCHIMEDES: I misspoke, Sire. Mathematicians are not skilled at
diplomacy, being raised in the habit of truth.

But allow me to voice my puzzlement.

These forty years past, you've been allied with Rome.

What better shield against Punis than Romulus' sons?

HIERON: My old friend, too many hours have you stirred the ashes
of your hearth.

Carthage lies to the south, geometer, two days by sail.

Hannibal occupies Italy, scarcely further by land.

Syracuse lies between, a fruit past ripening, but still
worth the plucking--or the trampling.

Would you savor that wine?

ARCHIMEDES: I am old because I have avoided drinking bouts.

HIERON (angrily):

Prudence dictates defense.

(Coughs and sits.)

ARCHIMEDES: Sire?

HIERON: It is nothing.

But you have not answered my question.

ARCHIMEDES: So, I am to poison the Syracusan grape. Strange labor for a
vintner, stranger for a mathematician.

Is this task a command from God or King, Hieron?

HIERON: I would neither; for now it is merely the request of a
friend.

ARCHIMEDES: Then as a friend I'll think on it.

(Exit.)

HIERON: Ingenuous soul, scratching diagrams in ashes or sand,
Your geometry rules the heavens but not the world of men.
With compass and straightedge you divide circles
...into infinitesimals.

And by this dissection you predict an eclipse...

reducing the gods to orreries.¹

Thereby is Phoebus reined; no longer does his chariot
charge willful across the sky.

Sunset of Apollo,

I weigh the wonder lost against the knowledge gained,
and find them closely balanced.

But Archimedes, master of levers and scales,
shifts the old equilibrium.

"We shall displace Olympus, given a place to stand!"

Yes, his disciples will heed the cry and grind the mount
into atoms,

each to be measured by calipers of the mind.

But discontented still, they shall reforge these atoms into
gods,

and in so doing, become as gods themselves.

Yet, for all the wonders wrought, what do these new

Olympians know of men?

While the Mamertines plundered Sicily, did they act? or

¹Alt.: Dissecting thus you predict an eclipse...

and reduce the gods to orreries.

dither? torn between the entreaties of slavery and death.

Syracuse stood paralyzed--hypnosis of anarchy--

rabbits all, eyes stunned wide by the invader's torch.

The moment begged to be seized.

And I, young, the army's commander, nodded to Mars and

snatched the throne...with an iron fist.

"Tyrant!" they cried after my first defeat.

"Savior!" when victory was at hand.

Savior it was. Prosperity I restored with skillful alliance.

Trade increased, territory augmented.

And now citizens proclaim me master of the governing art.

Archimedes knows not the value of his doodles.

That is why I, and not he, am King.

CHORUS:

King Hieron!

A tyrant bred, you have insolence forsworn and rule with

a measured hand.

A golden summer has punctuated Syracuse's fall.

You honor the gods, observe their feasts.

Yet they, not we, remain dissatisfied.

Hannibal, second to Alexander alone, rages through Italy

unchecked.

The unscalable Alps do not deter him,

snow and frost merely toughen his skin.

Only the city eternal opposes his everlasting scorn.

Hannibal will never stop but Rome will never yield,

a paradox not quickly resolved.

Yet on that day, when the world is dissolved into

ashes, and hell has turned to ice, should Destiny favor

Hannibal,

men will turn their eyes toward pagan gods as their hearts

are plucked for sacrifice.

But should Fate choose Rome the victor, Carthage beware!

Your great empire shall be erased from the surface of this

earth.

And your only gravestone shall be a farblown ash that

irritates the blindman's eye.

Hieron, who sees with clearer vision than other men, the

choice is yours.

Through Scylla and Charybdis you must chart a course.

STROPHE: What choice? We stay with the Romans. Our pacts with them
are our strongest bulwarks. Their legions our feet and arms,
their fleets our caravans.

If you cross them, Syracuse will be crucified.

ANTISTROPHE: But Heiron is right. Rome bends under Hannibal's onslaught.

Her protecting wing is broken. Syracuse must find another
course.

CHORUS: Wise Hieron knows there is only one: the science of
Archimedes.

It pays no heed to the follies of men,
neither, would it seem, to the waywardness of gods.

It is logos pure, universal law.

How can it fail, the shield of Achilles?

Take it, take it swiftly,

and do not look back.

(Exit all but HIERONYMOUS.)

Scene II

HIERONYMOUS rises and picks up the wreath which HIERON has left on the throne.

HIERONYMOUS: Grandfather, you are old and weak, unfit to wear the crown.

What king submits to such insolence from a subject?

And a mere mathematician at that, who has filled his life

with ciphers,

nullities heaped upon zeros,

until his achievement at old age is to have built a mountain

of nothing?

Were I King, I should exile Archimedes.

Mild.

Twitch his tongue with hot pincers?

Tempting.

Break him on the rack?

No. Harsh, I admit it.

But, by the gods, I would not bear him, as you do.

Nor engage in witty repartee, as you do.

Nor suffer in silence when my tongue fails--as you do.

King Hieron, command! Where is your voice?

Near half a century you've bowed before Rome.

Syracusans tire of the Italian boot kicking the Sicilian
heel.

They want a leader.

Were you a citizen, gazing on the plain of battle,
who would strike fire in your heart?

Fabius. the Delayer,
dithering, retreating, dogging the heels of Hannibal?
Or the Carthaginian himself, who storms the Alps like
Prometheus?

Who makes a laughing stock of the Romans in battle upon
battle,

And leaves them quivering, spineless cowards who dare not
offer him the decisive test?

For they know the outcome.

Yes, tell me citizens, you there in the shadows, whom do you
most admire?

(Enter CHORUS)

CHORUS: You are right, Hieronymous, son of Gelon,
Vassals of Rome is a role not suited us.

Fabius the Delayer stirs not our imagination.

Now Hannibal, there is a man, decisive, quick, strong.

When you become King, the mold is ready to be filled.

HIERONYMOUS: Fools.

So seriously you fall victim to jest.

CHORUS: Speak more clearly. We cannot understand you.

HIERONYMOUS: Hannibal is a barbarian who will slit your throats and drink
your blood.

(HIERONYMOUS pretends to kill a member of the CHORUS.)

Mercy is foreign to him.

CHORUS: Oh!

HIERONYMOUS: This is the mold you wish me to fill?

CHORUS: No, we have erred and admit it. Protect us; that is your
duty as King.

HIERONYMOUS: Not only do you mistake jest for earnest, you confuse father
and son.

Who rules, tell me?

CHORUS: Hieron, of course, we know it.

HIERONYMOUS: And who succeeds him?

CHORUS: Your father, Gelon.

HIERONYMOUS: Ah, now the simpletons have discovered complexity.

You see, my coronation day is not close at hand.

CHORUS: But were it so?

HIERONYMOUS: I am not an usurper.

CHORUS: No one has suggested it.

HIERONYMOUS: And no one shall.

The crown I'll lower to my head in justice and rule with the
people's consent.

CHORUS: Admirable sentiments, we approve.

But do you not grow impatient, Hieronymous?

HIERONYMOUS: Never. Haste is unworthy of a prince.

CHORUS: While we stood in shadows, you called Hieron old and weak.
Archimedes you would break on the rack.

HIERONYMOUS: I was merely jesting, I have said it once.

CHORUS: Of course, we misunderstood.

But on that day, when you lower the crown to your head in
justice, what sort of ruler will you be?

HIERONYMOUS: When the day comes, strong, decisive, quick.

CHORUS: Good. Tell us, what then?

HIERONYMOUS: Very well, for amusement's sake we'll play this game.

Swiftly I'll restore Syracuse's glory to its previous brilliance.

CHORUS: Yes, blinding--

--incandescent--

--shall be your reign.

HIERONYMOUS: You flatter me. I shall not succumb.

CHORUS: Do not. Take the tarnished crown for a moment only; rule
briefly with our consent.

HIERONYMOUS: Dare I?

(Begins to lower the wreath.)

CHORUS: No, do not set it down.

Think first, what pumice needs be crushed to achieve the
required luster.

Will you challenge Fabius in single combat to increase his
respect?

HIERONYMOUS: Perhaps.

CHORUS: Or join him for a march on Carthage--

HIERONYMOUS: --to squeeze that city between the jaws of a vice--

CHORUS: --until the juice dribbles to the ground--

HIERONYMOUS: --as from the skin of a broken pomegranate.

CHORUS: What then?

HIERONYMOUS: Pleasant meditation.

I'll feel the rivulets between my toes and survey the world
spread before my feet.

It lies there for the grasping.

CHORUS: Conquerer--

HIERONYMOUS: No--

CHORUS: Yes. We bow suppliant before thy vision.

Command and we shall follow.

To Asia, Turkey, Macedon,

Lead us, blood of Pyrrhus--

HIERONYMOUS: Can I trust you to obey?

CHORUS: Command and we shall follow;

you have heard us once, we swear the oath again.

Blessed is he whose life is forfeit

to cast away all binding yokes,

to light Syracuse by the dawn of day,

to bask in freedom--

HIERONYMOUS: --glory and honor--

CHORUS: Victory! Lead on!

HIERONYMOUS: Then behind me! We are off to war!

CHORUS: The clank of armor, the crush of shields,

sweat and dust, high-burning sun.

Spears will break, men will cry

STROPHE: Attack!

ANTISTROPHE: Retreat!

HIERONYMOUS: Joyous sounds!

CHORUS: The air will clear and then,

With battles won we'll hoist you to our shoulders,

and on garlands bear you home.

Maidens, strew rose petals in his path!

Let his feet touch not the earth, but tread on silken tapestries.

Unfurl the crimson band, mount the steps, fling wide the
heavy palace doors.

Within awaits a reception to be envied by the Argive King.

A banquet, a feast, a toast raised high,

A song of fallen heroes,

and exploits worthy of gods.

HIERONYMOUS: A great day when I am King!

CHORUS (Various members):

Festivals when you are King!

Music and dance when you are King!

Revelry and drink when you are King!

A sacrifice to Bacchus when you are King!

(Enter HIERON who has been watching from the wings.)

HIERON: I shudder to think when you are King.

You, rabble, lower him to the ground where we may gauge his
true height.

So eager to sacrifice, Hieronymous, yet who is the victim?

A newborn lamb who has scarce opened its eyes?

An old man whose eyes will soon drink in mountains and

sea for the last time?

Or a younger man who stands between you and the throne?

HIERONYMOUS: I had not considered the matter so deeply as you suspect,
Grandfather. I was merely toying with them.

HIERON: Is that so? Then perhaps Syracuse herself is to be
immolated on the pyre of your benign amusements?

HIERONYMOUS: You have no cause to speak to me thus, Hieron.
Your entrance was ill-timed.
These cattle may be blind to a joke but I am able to
see things as they are.

HIERON: And how are things, as they are?

HIERONYMOUS: Closely balanced; the scales tip first forward then...back.

HIERON: I cannot argue.

HIERONYMOUS: Intolerable. Under you, our citizens suffer an unbearable
indignity.

HIERON: Indignity? How so?

HIERONYMOUS: Ships, supplies, indemnities--all to Rome.
Syracuse exists merely to feed that insatiable monster.

HIERON: She exists; do not forget the central point.
I would rather feed a monster than be swallowed by one.

Syracuse has prospered under Rome. My people are content.

Life under Carthage cannot be better, ergo it must remain as

is or turn for the worse.

You will grant the logic, the middle is excluded.

HIERONYMOUS: So claimed the great Aristotle, I am taught daily.

And let us not forget, of course, that day by day tales of
the Carthaginian's cruelty reach these shores.

Slavery, torture, human sacrifice. All imaginable horrors, and
some beyond.

HIERON: Now clarity shines through your vision.

HIERONYMOUS: Yet, if such tales are true, why have half the towns
in Italy raised his standard?

HIERON: Child. Loyalty is easy to command when Fortune fills your
sails.

Do not be so hasty to raise banners in a shifting breeze.

HIERONYMOUS: You are like Gelon, full of speech, empty of action.

HIERON: Your insults I bear with learned patience, but you, in your
juvenile haste, have confused father and son. Gelon has
learned from me and Gelon, at least, has learned to pause.

HIERONYMOUS: When does he return?

HIERON: Any day. And I pray to Hermes to speed his trip home. This
tutelage is his duty, not mine.

HIERONYMOUS: Tutelage. In your own weakness you call me childish,
juvenile, and yet you expect me to thank you for the advice?

HIERON: Against Medusa's petrifying gaze, Perseus' sword did not
suffice.

Against Troy, it was not the spear of Achilles that breached
the walls.

A reflecting shield, a hollow horse. Brain, not brawn.

HIERONYMOUS (from the pit):

Archimedes!

HIERON: Archimedes. Why would I waste his time with trapdoors?

The work of a mere artisan.

Now, I go to evening sacrifice and leave you to contemplate
the results of rash action.

(Exit HIERON.)

(HIERONYMOUS climbs out of the pit, picks up his sword and sits on the throne.)

HIERONYMOUS: He is right, I should not have angered.

Reason is lost when tempers flare.

Very well, I shall contemplate the consequence of action
ill-considered, though the King in his hasty retreat leaves
me bearing unkingly insults.

That abrupt exit suits his character perfectly.

When he ambushed me, jest in full flight, he failed to
catch the joke. When I spoke in all gravity, he refused to
hear me out.

Only Archimedes catches his ear, and that by a ruse.

A cagey merchant of knowledge, this mathematician,
increasing the price of his wares by a studied aloofness,
appearing but now and again so that his goods seem the
rarer.

He sprinkles the ground with a word on treaties,
a guide to diplomacy, his considerations of defense.

The people, eager to snatch them up, drop to their knees and
are blinded by pure gold.

Pure gold, yes, until you examine the craftsmanship at close
range and discover that the advice, like this crown, is a fake.

(He crushes the crown and hurls it away.)

Geometer, you are a charlatan whose reasoned arguments are
merely a thin patina disguising cowardice.

If we scrape away this elegant rust, what shall we find?

Blood?

(He cuts his arm with the tip of his sword and holds up his
arm inspecting it.)

Or water?

(Blackout.)

Scene III

The house of ARCHIMEDES. ARCHIMEDES sits at the hearth with a stick, drawing diagrams in the ashes. His wife, GALATEA, is fixing supper. As she finishes, she takes a bit of the food and puts it into a plate and takes the plate to a small altar near the hearth. She lights a candle or makes some other ceremonial gesture before spreading the plates on the table.

GALATEA: Husband!

(No reply.)

Husband, come for your supper.

(ARCHIMEDES raises his head but merely stares at the fire.)

For fifty years I have shared your house but not your world.

That elevated place, where mists swirling perpetually cloak
your giant strides and mask the stubbing of your toe.

Where you stand with a lever poised across the heavens and
boast to move the earth.

A good turn of phrase; it has brought you renown.

I am left on the earth you intend to move with cloaks to
stitch and mantles to mend. I am left to look after the

hearth-gods you brazenly neglect.

At times I marvel at my patience. To support your travels
in that far-removed place, I gave up children who might
nurse me in old age. The suit of merchants and
noblemen I spurned and with it all the luxuries of their
station. To soldiers who promised to shower me with glory

turned my back, for what?

An austere marriage bed, mathematician....

Yet, a tranquil one.

I have not had to bear the sight of you borne home on a shield,
nor witness a merchant's foolery followed by a bankrupt house.
Neither have noble politics brought exile after a palace coup.
The ingratitude of children we have mercifully been spared.
You are kind, you have rarely raised voice and never fist.
Your needs are few. A good man in a famine, you'd feed on air.
Still, husband, I'm hungry, so rise to your feet and let us eat.

(ARCHIMEDES rises and comes to the table.)

What's this? To the sleep-walker's vacant stare I'm long
accustomed.

The return to earth from godlike concentration I've also seen
before.

But these furrows? Absent from your wrinkles yesterday, they
are additions to the woes of age.

ARCHIMEDES: It is true, Galatea. I fear our placid life...is over.

GALATEA: How so, husband?

ARCHIMEDES: Our King has requested that I strengthen the city's defenses.

But I carry neither the sword of Mars to command,
nor the lyre of Orpheus to beguile.

A sword if you wish men to fear you, a lyre if you wish them
to love you;

both are necessary if you wish them to work for you.

GALATEA: Hieron will provide the sword, and the balladiers.

Archimedes, it is evident, will provide the brains.

ARCHIMEDES: O my feeble excuses! Sword, lyre, no, it is simple.

What I lack is the stomach.

GALATEA: Tell Hieron his request is denied.

ARCHIMEDES: Wife, the request of a king differs not from a command by
more than the thickness of a whim.

GALATEA: He is our kinsman and loves you like a brother. You must
turn to him as one.

But words are poor orators. Men listen with their heads yet
are swayed by their hearts. For this reason they are easy to
deceive.

Plead with manly tears, sickness, age. Tell him you're busy with
other occupations. Your words will not move him,

but when he feels your despair he will relieve you of this duty.

ARCHIMEDES: Woman, your calculations are finer than mine.

No, leave it.

Blood may be thicker than water but Hieron is a king and to a king it is the life of his subjects that runs through his veins.

GALATEA: Then he will command and you will obey.

There the matter ends.

ARCHIMEDES: Galatea, the business of war is not for mathematicians.

GALATEA: I see no business, no mathematician. I see only a subject and his
king.

ARCHIMEDES: Ach, woman, let--. What's this? Visitors.

I'll have no peace tonight.

(Enter CHORUS)

CHORUS: We wish to speak to the geometer.

ARCHIMEDES: A geometer once lived here. But he deviated from the sublime and became an engineer. You'll have to speak to him instead.

Go on.

CHORUS: You have denied Hieron.

ARCHIMEDES: I have denied nothing. I merely deliberate.
You act on rumors.

CHORUS: Rumors are no more than facts in the stage of condensation.

ARCHIMEDES: The false crystalized. I deliberate.

CHORUS: You dither, and by what right? Syracuse has fed you since birth
and showered your useless work with honors. We have
indulged your whims three score years and ten. The allotted
time is up. Payment is due.

ARCHIMEDES: You wish--?

CHORUS: The sublime made practical.

ARCHIMEDES: Practical. How repugnant that word has become to me.
In past years I delighted in fashioning machines. To irrigate
fields, to lift burdens too heavy for man.
Practical, I thought so then and was glad of it. The word seems
to have changed meaning.
Rabble, I owe you nothing. Syracuse has fed me as she has fed
the artisan who adorns a vase with figures. From his brush you
request nothing practical--beauty suffices. I will stand my
geometry next to any vase and the gods will not hesitate to judge
my work the better. Practical--

CHORUS: Then you refuse?
We shall tear your body to shreds and hurl the pieces into the
sea.

ARCHIMEDES: The fate of Orpheus? I shall be in good company.
Now either make good your threat or get out of my house. I
have put up with you long enough.

(Exit CHORUS. ARCHIMEDES returns to the fireplace. Enter ERATOSTHENES.)

ARCHIMEDES: Ah, the invasion continues.

GALATEA: Welcome fond face of Eratosthenes. What brings you to our
home?

ERATOSTHENES: My stay in Syracuse nears its end.
Soon I shall return to the Alexandrian Library,
that masoleum where I have been entombed these many years
as chief mummy.

I wanted several hours more with my old friend and better.

GALATEA: Then be warned, he has quarreled with his king and kinsman.

ERATOSTHENES: That is what kings and kinsmen are for.

GALATEA: Do not jest, Eratosthenes, the matter is serious.

ERATOSTHENES: And the matter is?

ARCHIMEDES: Eratosthenes, why are you called Beta?

ERATOSTHENES: You know as well as I, Archimedes; the title was not of my
own devising. The uninformed suppose me to be in all
endeavors second only to Alpha, the first in each field.

ARCHIMEDES: Then turn not to my wife for explanations, but to the first in this
house.

ERATOSTHENES: I'm always glad to speak with Alpha, my better in all things--
should he deign to open his mouth.

ARCHIMEDES: I'm sorry. You'll find no better here, friend.

We will speak as equals.

Hieron has asked me to invent new devices.

Not swords or spears or slings or rams,

furnaced forged and battle tested,

But mathematics earthed, the sublime made practical,

theorems transformed into technology.

The King has visions of wondrous science.

dwarfing enemy ships, sinking them from afar,

Defeating Cathaginians while his people sleep peacefully in bed.

Science for man?

No, it is science gone mad.

Not for this the muses' geometry.

ERATOSTHENES: Why do you hesitate, Archimedes who is unsurpassed?

Such trifles for you would be relaxation, a day's good fun.

Do it, amuse yourself, indulge.

ARCHIMEDES: So, you too are against me. Has the rabble swayed you? Or

perhaps you appear as court jester--

ERATOSTHENES: I am emissary of neither King nor crowd.

ARCHIMEDES: Then you speak as grindstone.

Very well, Eratosthenes, against you I'll sharpen my arguments.

I grant your point. To create devices I'm not incapable.

Amusement, fun, no doubt an infant's glee.

To be let loose in Vulcan's shop, to create any toy that
fires my mind, and that from the forge of a god.
Just think, Agamemnon's sceptre, can we not do better?
Instead of gold, the stoutest trunks. In place of jewels
the hardest granite. Wielded not by hand, we'll launch them
from catapults and crush the enemy walls.

Forward.

Vulcan made Pandora, poured her from a crucible and
blew life into her lifeless lips.
We'll create similar automata,
power them by water or steam and send them off as invincible
soldiers.

Arrows and stones will bounce from their bucklers; we'll
watch from the ramparts, laugh, toss a melon rind, sleep.
In our dreams let's not forget Hephaestus' great masterwork,
Achilles' shield, with its stars and cities, learned councils
debating whether to storm and sack.

It was fivefold silver, gold, tin, bronze--
correct me if I've misremembered.

Heavy on the arm and clumsy, well suited I think for a brainless
hunk.

Why not a net of silk spread across the bay?

We will entangle ships by finesse as they drop anchor,
We will disable their rudders and bind their oars.

Child's play:

Syracuse looks out over sheer cliffs,
and her harbor is a perfect snare for witless vessels.

ERATOSTHENES: I see the ideas have taken hold. They are good ones and,
as I said, fun besides.

ARCHIMEDES: I'm not a Sybarite. At times I've wished to strangle kings.
Good fun, too, I imagine.
No excuse for murder.

ERATOSTHENES: Who talks of murder? We speak of defense.

ARCHIMEDES: We speak of responsibility.

ERATOSTHENES: The responsibility is Hieron's, the King who commands.

ARCHIMEDES: Ah, now I am convinced you have come on your own,
for your words contradict Hieron's of today.
You wish both the laurels for achievement and the freedom
from guilt.

You must choose.

ERATOSTHENES: You must explain yourself more clearly.

ARCHIMEDES: A goldsmith forged an adulterated crown,
I exposed him by my science.
Hieron executed him.

The fellow was guilty, there was no lying in the numbers.

Hieron rightly refused to exonerate me--

ERATOSTHENES: --from the execution?

ARCHIMEDES: Yes.

ERATOSTHENES: But he was guilty.

ARCHIMEDES: So was I.

ERATOSTHENES: I see no dilemma.

ARCHIMEDES: The smith's blood is on my hands.

Not the cleanest blood, I grant. But was it so dirty
that it need be poured over his anvil?

I can hardly say; the crime did not seem great to me.

To Hieron though...

And the next victim? Suppose a petty thief, a hungry girl.

Then will the geometry of Archimedes find her culpable?

ERATOSTHENES: Let me ask you this, would you spend your days under a tree

because an unjust king one hundred years hence will misuse

your discoveries?

Are you guilty retroactively?

ARCHIMEDES: To progress you know I'm not opposed.

Neither would I call myself guilty in the case you mention.

Had my discovery been accidental, then happy accident.

Let the burden of misuse weigh down the King, not me.

But I distinguish between accident and design.

I sought a method to expose the crime;

I succeeded.

ERATOSTHENES: Hieron gave the order.

(The argument becomes heated.)

ARCHIMEDES: Were I a cobbler and fashioned sandals unfit to wear,
you would not say your decision to strap them on
freed my workmanship from obligation.

ERATOSTHENES: No.

ARCHIMEDES: O geometers, by straightedge we rule the world and exempt
ourselves from the world's rules.
If cobblers can refuse to make sandals, we can abandon
hammers.

ERATOSTHENES: Others will pick them up, Sand Reckoner, and be richly
rewarded for what to you would be, as I've said, amusement.

ARCHIMEDES: The best prostitutes are always the most richly rewarded.
Is this an excuse?
Let them take responsibility for their fornications, as I'll
pay dues for mine.
And is it true that others could do it? If I, Archimedes,
refused, who would take my place?

ERATOSTHENES (forcefully): I, Eratosthenes.

ARCHIMEDES: And should I, Alpha, refuse, and you, Beta, besides, who
would be Gamma?

ERATOSTHENES: There are always gammas to follow betas.

ARCHIMEDES: Shortly the alphabet exhausts itself. And then?

ERATOSTHENES: Very well, a portion of the harvest is ours.

But I'll gladly reap it for a crop justly sown.

Hieron has not asked you to raise a finger against anyone;

He has asked you to build a shell, a shield, a net.

No belligerence there.

Yet, all your arguments are false, Archimedes, do not deny it:

You would not hesitate to club a thief entering your house,

or raise a knife against a brigand, or a sword against an invader

burning your land.

Point out the crime, Alpha; I am blind.

ARCHIMEDES: There is vision in it, however blurred.

True, your defense is just. I do not have the pacifist's strength to

sit inactive and endure the pain of piercing arrows.

A net cannot pierce, you are right; it can only ensnare--and

strangle.

Swords to ploughshares, the phrase to be sure is commonplace.

But a shield can be beaten into a sword.

I am not comfortable with these divisions,

The hairs are fine ones to split.

ERATOSTHENES: A man who splits polygons to infinity, should have little trouble
splitting the division between invasion and defense.

ARCHIMEDES: Very well, you've been advancing hypotheses, so I'll speak
concretely:

Syracuse is not at war.

ERATOSTHENES: The present is but the fleeting intersection between future
and past.

Archimedes, your geometry is not constrained to such narrow
points.

ARCHIMEDES: Do not change the subject.

ERATOSTHENES: I deviate not a hair's breadth.

Of the latest news you're apparently ignorant.

Hannibal has defeated the Romans at a lake, Trasimene, if

I've remembered. Ten thousand dead, or fifteen.

ARCHIMEDES: I grieve for the brave men who've fallen. But Hannibal has
no grievance with us--you've forgotten we were once allies.

ERATOSTHENES: Once!

ARCHIMEDES: Hieron has kept the peace for fifty years by artful diplomacy.

He does not possess a greater weapon in his store.

Pray that Athena's wisdom be preserved by his sons; I would

fifty more years of geometry.

ERATOSTHENES: Have you, geometer, finally abandoned science for prayer?
You'd do well to remember Athena's other face: the goddess
of war.
Then pray, pray that she graces Hieron's sons with her aegis
and lays her sword aside.

ARCHIMEDES: Should the sword be unsheathed...?

ERATOSTHENES: What will you do?

ARCHIMEDES: I will sleep; you've exhausted me.

ERATOSTHENES: And you me not less. How I wish our discussion had been
mathematical.

Opinions give way to reason; the only victor is logic.

ARCHIMEDES: These practical pursuits are unworthy of us. Come again
before you leave Syracuse. I have some theorems you'll wish
to see.

ERATOSTHENES: With pleasure. Now I go to a well-deserved rest.

Good night.

(Exit.)

ARCHIMEDES: So, wife, is logic the victor? And, if logic triumphs, who
are the victims?

GALATEA: It is late to mourn the victims of logic; on command of
geometers and kings they have fallen numberless.
But if you speak of the battle just past, I see no clear victor, less

logic.

You both inflicted wounds. Among most they would have been
fatal to the friendship.

Only scientists, strange beasts, divide the arrows aimed
at heart from those directed at brain and do not take offense.

But I side with Eratosthenes. The justice of the cause
outweighs all other considerations. Syracuse needs you, if
not at this moment, then soon enough.

ARCHIMEDES: If I cannot sway my wife then I fear I will be truly alone.

GALATEA: I need not be swayed to remain your wife.

Now, the day is done, night has fallen. Let sleep erase all
worries.

Scene IV

The steps of the palace. CHORUS is standing there. Downstage is a post with a compound pulley attached to it. A rope extends offstage left.

Enter ARCHIMEDES, ERATOSTHENES, GALATEA.

CHORUS (Various Members):

Here he comes,

The mathematician who refuses to serve.

No, he merely deliberates.

Yes, let us meditate--

Contemplate--

Ruminate.

We will consider the matter deeply.

We will take it under advisement.

We will examine every detail.

Ah, words. The gods created them to prevent action.

ERATOSTHENES: Let him pass!

CHORUS: Let him agree.

The King does not ask that we serve. He commands.

How does Archimedes differ?

GALATEA: Let the King command Archimedes to serve as you do--as oxen.
Then he will agree.

CHORUS: Each serves as best his talents dictate, but each serves.

(Enter HIERON with HIERONYMOUS.)

HIERON (coughing):

Cease and stand aside.

The taunts you hurl at each other are not arrows
carefully aimed at opponents but stray shafts loosed by erupting
anger.

You have heard the news from Trasimene and it disquiets you.
Tempers flare as Mars, with work of his sword, checks Rome's
advance, while he permits the Carthaginian to grow ever nearer.
Indeed...One can almost hear the pounding of elephant feet,
terrifying resonance.

I have commanded a sacrifice to be made. Zeus, may this gift
forestall your rage.

You, Priest, slit the lamb's throat, burn its flesh and pass the
meat around. I pray this blood will be the last.

(The order is carried out.)

From gods to mortals I now turn.

Archimedes has requested an audience. Perhaps he too
hears the approaching thunder.

Geometer, has Athena guided you to the right decision? Have
you conceived a plan? ARCHIMEDES:

A demonstration, Sire. I have bent that much.

Please come, to the base of the palace steps.

Carefully, let me take your arm.

There.

Do you see yonder ship in the courtyard which I have had
mounted upon wheels?

HIERON: Yes.

ARCHIMEDES: Fifty men stand atop it. Grasp this rope and pull.

HIERON: Even Herakles in his youth had not such strength.

(He coughs.) You are a jester.

ARCHIMEDES: Pull, my King, and with one hand.

(HIERON picks up rope and pulls.)

CHORUS: Ah!

HIERON: It is a miracle.

ARCHIMEDES: No, Sire, a compound pulley which multiplies the strength of
man.

To mount such devices on the ramparts of Syracuse would be a
simple matter.

To play havoc with Carthaginian ships, to heave them from the
water, let the crews drown...

ERATOSTHENES: The idea is one of genius. I thought you'd come round.

HIERON: Fortune demands we begin at once. Were Gelon only home,
he'd marvel...

Look at how the ship glides effortlessly,

as if the stroke of one hundred oars impels her forward.

(ARCHIMEDES surreptitiously slips a pebble into the pulley.)

What's this? The motion's stopped. I can't force it. Your
contraption has jammed.

(ARCHIMEDES removes the pebble.)

What do you hold there?

ARCHIMEDES: A warning, Hieron, in the form of a pebble.

My friend Eratosthenes and I last night locked horns over
mores and ethics, duty and responsibility. The battle was
pitched, both rams stubborn.

But one argument got lost beneath the high words:

Sophisticated machines are prey to simple ills.

I hesitate to build contraptions.

HIERONYMOUS: Will no one expose the charade?

Archimedes' is cowardice disguised as reason.

ARCHIMEDES: Sooner cowardice disguised as reason than folly cloaked
as pragmatism.

HIERONYMOUS: Hieron, his impertinence knows no bounds.

HIERON: At times I am tempted to agree.

ARCHIMEDES: My King, a pebble knows no impertinence.

And a geometer knows to divide the world of desire from the
world of possibility.

The skill is an unpopular one, for it admits of limitations,
and limitations smell of defeat.

Yet, were I asked to name the skill which separates me from
my fellows, it would be that one. And were I able to give my
fellow citizens a single gift, it would again be that:

To see the world as it is, not as one desires it to be.

Hieronymous calls me impertinent for throwing doubts on our
enterprise, as if Nature changes her course to satisfy imperial
decree.

Will this pebble refuse to jam a machine because a child calls me
impertinent?

ERATOSTHENES: This new argument is your best, to another geometer.

HIERONYMOUS: When the crown rests on my head, Archimedes, I shall be
tempted to tear your limbs asunder with your own pulley.

ARCHIMEDES: I thank the gods I shall be long dead. Yet see how you pull aside
your own cloak of reason leaving the rage exposed.

HIERONYMOUS: If I am quick to rage, you give me ample justification.

But I'll catch my breath and merely point out, with

due respect, that five minutes ago you demonstrated the
soundness of your invention.

A boat with half a hundred warriors an old man moved, as if
it were laden with feathers.

You now expect us to deny our own eyes.

Archimedes, you argue against yourself.

ERATOSTHENES: This angry youngster makes a point despite his anger.

ARCHIMEDES: A small one, I concede it.

But one ship on wheels is not a fleet.

A pebble, a frayed rope, a cracked beam. In demonstration
the error is small; in battle it is a certainty.

HIERON: Do you still refuse, Archimedes?

ARCHIMEDES: I want to know from you both, what will you do when the
Carthaginians attack and my defenses fail?

I am not of the belief that a votive offering to Zeus will suffice.

STROPHE: He profanes the gods.

ANTISTROPE: He considers himself to be above gods.

HIERON: Silence!

Citizens, I tell you again, do not allow terror to poison good will.

A sacrifice we made, and another we shall, on every full moon
hence, to ward off the approaching storm.

But gods favor the strong; it is always thus.

Gelon commands an army of sound men. Our well-tarred fleet
is match for any. Do not the Romans themselves purchase our
ships?

And their legions, stationed here in Sicily, will come quickly to
our aid should we call them.

HIERONYMOUS: From Rome itself they will come. You yourself, Archimedes,
called her our best and strongest shield. Now see how we value
your advice. Why do you not return our consideration?
With your help or without it, Syracuse shall stand unyielding.
When the Roman troops arrive, Hannibal will be caught
between an unstoppable force and an immovable object.
There can only be one outcome.

HIERON: Your words finally begin to please me, Hieronymous.

ARCHIMEDES: In all my years as a scientist, I have seen neither an unstoppable
force nor an immovable object.
They are the constructs of mystics who cannot distinguish
between what is and what they desire.

HIERONYMOUS: This arrogant mathematician is impervious to compromise.
Perhaps he is more vulnerable to other means of persuasion.

GALATEA: Husband, this prince sends shivers up my spine.

HIERONYMOUS: People, what do you say?

HIERON: Archimedes, look at my face, familiar to you long decades, and

tell me at last: do you refuse?

ARCHIMEDES: Sire, I do not wish to build contraptions.

CHORUS: The Prince speaks our mind.

Archimedes still hesitates beyond all reasonable doubt.

He builds marvels and demonstrates them before our eyes.

Yet he denys them.

He refuses his king,

He leaves us in danger.

Order him, Hieron!

Order him to defend Syracuse--

GALATEA: You have no right!

He has served you more than all here combined.

HIERONYMOUS: Then where is your plan, Archimedes? Let us hear.

ARCHIMEDES: I...

ERATOSTHENES: He has told you his plans: diplomacy, treaties, alliance with
Rome.

STROPHE: Exile him!

ANTISTROPHE: Too soft. This is treason!

HIERON: Archimedes, I must command--

ANTISTROPHE: --his death!

Now! The gods demand it.

ERATOSTHENES: And where will that leave you?

STROPHE: Yes! Where?

(Enter MESSENGER.)

HIERON: Archimedes, I command you--

MESSENGER: My King!

HIERON: Do not disturb us.

MESSENGER: If I allow you to dismiss me now, you'll have my head.

HIERON: Very well, what is it?

MESSENGER: There is no easy way to say this: your son Gelon...

HIERON: Yes?

MESSENGER: My tongue rebels.

HIERON: Loosen it quickly.

MESSENGER: He is dead, my King.

HIERON: How can this be? He was in good health.

MESSENGER: Enroute from Messana he fell ill in the bad weather.

Sire, he was no longer young.

(HIERON waves MESSENGER away and collapses on the steps.)

CHORUS: The heir apparent, dead!

GALATEA: Husband--

HIERON: No longer young! The flower of youth!

Gelon, my son, my strong arm, a King in the eyes of his people
and in every true measure besides.

Gone!

O mighty immortals, the gifts you bestow are the gifts of
cowards.

You feared the rivalry of man and so gave us death;
were you stronger you would have spared us life.

In what perversion of generosity have you granted me old age?

You have denied me my son's final embrace, bitterest and
sweetest of all. You have condemned me to become a hollow
vessel of memories, who walks somnambulic through, but
untouched, by the living earth.

There, Gelon, he raises a bow; there he wrestles an opponent to
the mat. Vivid memories! And there, his rotting corpse lies
stretched on a marble catafalque.

Accursed gods, the incantation of grief falls on deaf ears.

Yet, were deafness your final cruelty, I could bear it.

No, you are not content. You have denied me my own deathbed
where, surrounded by children, I could gladly draw my final
breath and pass the sceptre to my son. But now, my sceptre...

to this!

Olympians, you have dragged me through life to stand me at the
future's abyss. What a chasm opens at my feet! And I dread to

face it.

O Syracuse, do the gods intend for you to be engulfed?

What lament can I utter, what sacrifice can I yet make that will
save your walls from crumbling under the shifting earth?

Hear me!

Ah, Fortune's thunder, you crash impenetrably above my head,
and drown out my voice as I hurl it toward the deaf ears of gods.

My throat is hoarse; my voice weak. I have no entreaties
left for gods. I can only mourn.

O Syracuse!

ARCHIMEDES (kneeling):

Sire, I yield.

CHORUS: Cover yourselves with mantles.

Raise the bier.

Light the torches.

Beat the drums.

(The lights dim as torches are lit for a funeral procession. All exit. The stage remains
dark.)

Scene V

The ramparts of Syracuse. Work on the construction of defenses is in progress. The CHORUS members are engaged in earthwork, moving beams etc.. A few catapults stand on the battlements, as well as some unfinished devices resembling large cranes. Downstage, ERATOSTHENES and ARCHIMEDES examine construction plans.

ARCHIMEDES: You there, the smaller catapults to the fore, the giants on the bluff--face them seaward. And find me a hefty boulder, of at least ten talents weight. I want to test the range.

CHORUS: With the fury of Zeus in a storm, our bolts will rain down upon the enemy and crush him.

ARCHIMEDES: Let us first test the range or we may find ourselves caught in a thunder of our own devising.

CHORUS: Archimedes has gone to work, and his mind disturbs the earth no less than the sinews of Atlas. But even Atlas could not move us. Yes, Troy fell by cunning but cunning is on our side. We shall not make the mistake of relying on gods or propheses for protection. Instead Syracuse will stand aloof, behind defenses fivefold, farther removed than the

acropolis of Athens.

And though Hannibal crossed the mighty Alps, the sound of
his trumpets will not reach our Olympian preserve.

Let him wail.

For this we thank Archimedes who answered our modest
supplications.

We kneel to Archimedes, first among men.

ARCHIMEDES: You there, be sure that pillar is buried deep and sound, and
that the crossbeam swings wide over the walls.

CHORUS: Our giant claws will pluck ships from the bay as the
Cyclops snatched Oddyseus' crew...

ARCHIMEDES: ...and beat their brains out, spattering them across the
walls of Syracuse.

ERATOSTHENES: You are not happy.

ARCHIMEDES: I have donned the mantle of command because I could not bear
to refuse my King in his hour of grief.

I could not bear to kill him.

But this mantle does not sit well with me; it itches and
burns like the poisoned cloak of Nessus.

ERATOSTHENES: Look out across the sea and imagine one hundred Carthaginian
ships sailing toward us at full stroke. They are bent upon
storming and sacking the city. Women will be raped and men

put to the sword. Then Syracuse will be razed and its ashes
scattered.

You need not the incense of Delphi to reveal
this vision, Archimedes. You need only measure in your
mind's eye the distance to the tip of Africa.

ARCHIMEDES: Are you planning to return to Alexandria soon?

ERATOSTHENES: Yes.

ARCHIMEDES: How many stadia does she lie from Carthage?

ERATOSTHENES: A mere month's march down the coast for Hannibal, and no
mountains. The weather is tropical.

ARCHIMEDES: Are you not afraid?

ERATOSTHENES: I shall no doubt thank Archimedes for keeping him occupied.
Perhaps, in truth, danger always lies in the other man's city.
But, also in truth, we do not sit at his doorstep, as you do.
And Gelon is dead.
Are you not afraid?

ARCHIMEDES: Your oracles are always as clear as crystal, whereas mine
seem perpetually clouded.
But I am afraid, yes, afraid that we shall lower the shield
of reason when we should hold it high, that we shall cry out
our lungs when we should be pausing for breath, and that in
this moment of lowered guard, fear will defeat us.

I would not like to die realizing I had yielded to hysteria.

ERATOSTHENES: You will never die, Archimedes, not so long as that moon,
whose distance you've calculated, shines above the earth.

(Enter HIERON using a walking staff.)

ARCHIMEDES: You there, move that mirror farther along the ramparts!

HIERON: How does the work progress, Archimedes?

ARCHIMEDES: It progresses, Sire; in what direction is yet difficult to
say. Still, work is the best shield against that dread
anxiety which seizes idle souls and slowly paralyzes them.
My King, I see the walk from town has left you weary.

Take this chair.

HIERON: Weary. It's not something I would lightly admit to.

(Catching sight of his reflection in a mirror):

You, workers, wait, bring that mirror closer.

(WORKERS place a large metal mirror before HIERON.)

Can you recognize in this pale reflection the soldier who
so deftly seized Syracuse's throne fifty-four years ago?

ARCHIMEDES: The resemblance is still strong, Hieron.

HIERON: Or the young boy who sailed to Alexandria and returned the
greatest mathematician the world has known?

ARCHIMEDES: I should like to think that the wrinkles in my brain have
increased in proportion to those on my face.

HIERON (To WORKERS):

Begone, I dislike perfect mirrors.

(WORKERS carry off mirror.)

Geometer, tell me, which is more vulnerable: the body,
eroded by the elements, riddled by disease, ravaged by

years;

Or the soul, victim of God's every caprice and all
those wounds we inflict upon each other besides?

Over which does weariness triumph sooner?

(ARCHIMEDES remains silent.)

Why so sad, friend?

I can hardly recall a more perfect evening.

Look there at Venus, shining radiantly.

She reminds me of that other time, after sunset, when we
gathered about a fire on the beach and there, as we let sand
run through our splayed fingers, you reckoned for
Gelon the number of grains needed to fill the universe.

Do you remember?

(ARCHIMEDES nods.)

You first counted the grains laid side by side that equal
the width of a barley corn, followed by the number of barley
corns that make up a finger's breadth. Then the myriad

fingers in a stadium, and the myriad myriad stadia to the
moon.

You hardly paused for breath before you reckoned the
distance to the sun and finally the stars.

By the end, when you filled this volume with sand, you had
computed a number so vast that ordinary men would have
called it infinite.

Yet to you it was a number, like all the rest.

Gelon slapped his thighs.

Perhaps it was in the child's glee at discovering immense
things. Or perhaps it was as an adult, grateful for a
proof that all things are finite.

Which do you think?

ARCHIMEDES: I am sure it was the delight of a child, Sire.

HIERON: So am I. Gelon valued your advice.

ARCHIMEDES: It pleases me to hear that.

HIERON: Geometer, speak truthfully. Does the weight of these vast
numbers ever exhaust you?

ARCHIMEDES: The truth is that their buoyancy only increases with magnitude.
(Chuckling): Perhaps it is their many zeros which affords
them lightness. Forgive the levity.

When I am vexed by family squabbles--"Archimedes cease your

contemplation and find some wood--" or burdened by the
trod of daily life; when your politics exercises me beyond
all endurance;

or at those moments when solitude surrounds me,
and I gaze unwittingly into the fu...

HIERON: Yes?

ARCHIMEDES: ...into the future, Sire--

HIERON: Are you afraid?

ARCHIMEDES: --I turn to the lightness of numbers.

It is their great distance; you cannot know the peace it brings.

HIERON: I envy you, Archimedes. Gelon did no less. He marveled at
your abilities.

I remember the time when you presented him with a solar
system in miniature, that displayed the motions of the sun
and planets in all their intricacies. He spent countless
hours captive...

ARCHIMEDES: There are richer men to envy, Hieron.

The ability to reckon and fashion toys is a commoner's
craft.

Far fewer have mastered the art of wisdom.

(WORKERS carry another mirror past. ARCHIMEDES glances at it.)

Gods, would I trade all my knowledge for an ounce of wisdom,

at this moment more than at any other.

HIERON (also addressing mirror):

Phoebus, your crime is to have robbed the world of lightness
and left it exhausted.

Oh Archimedes, the wisdom you prize cannot prevent
nightfall, if the gods have ordained it.

ARCHIMEDES: Neither can knowledge, Hieron, though a man posses more of
it than there are sandgrains in the universe.

HIERON: Someday you will abandon toys and halt the sun in its
tracks. Have you forgotten your boast to move the world?

ARCHIMEDES: Must you remind me?
That cry of exultation was a younger man's and now I regret
the utterance.

But, if the day comes when I can halt the sun, I shall seek
your advice on the best course of action and you shall stay
my hand.

HIERON (glancing at mirror):

Archimedes...

ARCHIMEDES: Yes, Sire?

HIERON: When I...You will not swerve from this course.

ARCHIMEDES: I have given you my word. And you stand at my side to guide
me.

HIERON: You will not lose heart, promise me again.

ARCHIMEDES (kneeling):

I swear it, my King.

HIERON: Oh stand. I cannot bear a greater man beneath me.

Archimedes, do not abandon...

ARCHIMEDES: Sire?

HIERON: My grandson will need your guidance. Give it to him freely.

ARCHIMEDES (glancing in mirror):

O Hieron...were the decision mine.

HIERON: Archimedes, he is my flesh and blood...for all the rest.

ARCHIMEDES (softly):

I know.

Hieron, against my will I have taken charge of your
battlements. There was some justice in the request. Over
machines and devices I am master; I admit no equal.

But...I approach my limits. Find the strength to
relieve me of this duty.

HIERON: My friend, do not make me ask a second time. If I
am forced to beg you, I fear I...I shall no longer

be able to stand erect.

ARCHIMEDES (grasping him):

Then you have only to command. Do not forget you are King.

HIERON: King...

(Turning to mirror):

Who is king, so robbed of days ahead?

(A pause.)

Though my eyes scan your surface for oracles, you reveal
nothing but a blank, infinitely retreating.

Tell me what is to come and release me from this prison of
unknowing, I beg you on my knees..

(A pause.)

O, you spiteful, silent gods...

ARCHIMEDES: Zeus, if in your immortal blood flows a drop of pity...

(Enter MESSENGER.)

MESSENGER: Sire, I have news.

HIERON: Speak, though I am terrified to listen.

MESSENGER: Hannibal has defeated the Romans at a village called Cannae.

Fifty thousand Roman footsoldiers and five thousand cavalry

besides,

faced the Carthaginian infantry, thirty or forty thousand

more.

There has scarce been a day since Alexander when such a
multitude of swords and spears glinted under the noontday

sun.

The Romans charged Hannibal's bulging center. There, his Iberians and Celts yielded to the onslaught and the bulge flattened, then collapsed inward.

Those heathen troops fell back ever further as the Italians, sensing victory, poured into the pocket they had created.

But suddenly Hannibal's African wings closed up and trapped the Romans between the jaws of a vice. The Carthaginian cavalry--ten thousand horses--charged, encircling their foes from the rear.

And now the Romans were surrounded, jammed so tight they could not raise their swords.

The rest was a rout, the Romans cut to pieces.

I've heard the river there ran crimson three full days.

Already they call it the greatest battle in history and

Rome's worst defeat.

Hannibal's troops hauled gold rings from the battlefield in bushels.

He has ransomed Roman prisoners.

But Rome has refused and is sending survivors to Sicily to serve without pay.

The Roman consuls have outlawed weeping, no mourning

is permitted. Citizens are forbidden to spread rumors and exit from the city is barred. Silence in public is the law.

(HIERON has been staring into a mirror, visibly crushed. Silence reigns. Enter GALATEA.)

GALATEA: Have you heard the news?

(HIERON gradually straightens, turns to the others and surveys their faces.)

HIERON: To announce silence is to break it.
To forbid rumors is to fan the fires of their spreading,
and to outlaw tears is to ensure a deluge of grief.
No sign of strength, these edicts; they augur of capitulation.
So weep if you must at an ally's defeat;
Gaze also peacefully at this evening's stillness, at the
cliffs and sea that serve as our bulwarks.
Spread rumors if you wish; I shall not forbid them, for
rumors will surrender to the truth and the truth is that we
are protected.
I forbid only oppressive silence, the silence which stalks
the soul and leaves it prey to fear.
Go now serenely into the night. Return invigorated at dawn;
more toil awaits.
I leave you now.

(He gazes at ARCHIMEDES and exits.)

ARCHIMEDES (raising an arm): My King...

(The WORKERS gradually exit.)

My King, I pray that you have found a shard of lightness in
your darkest hour, to negate a portion of the heaviness

which weighs down your soul.

I have tried to shoulder some of this burden.

When your son died, I abandoned the entreaties of my
conscience and stood fast by your side.

Nor would I permit you to collapse when you vainly sought
the future in that hard mirror's image.

And though the role of princely advisor is repugnant to me,
in the end I did not refuse.

All these burdens I took from you, if not gladly, then
because friendship demanded it.

Now you have walked away erect, at last, and my legs begin
to buckle.

This weight crushes my ancient back. Oh, would I cast it
away!

Your men called me Atlas, a complement undeserved. No Atlas
here, Hieron; the tally of my years is scarce less than your own.

Not a firm shoulder to carry the heavens.

And in their primitive haste, your men forgot to ask: where

did Atlas stand?

Ah, I am exhausted.

(To an abandoned mirror as HIERONYMOUS enters):

Away, I hate perfect mirrors.

HIERONYMOUS: Where is Hieron?

ARCHIMEDES: Gone.

HIERONYMOUS: Have you heard the news?

ARCHIMEDES: More than is decent for a single day.

Your grandfather has appointed me your advisor.

HIERONYMOUS: Indeed.

ARCHIMEDES: Indeed. Do not worry; the post sits heavily.

HIERONYMOUS: Consider yourself relieved of the burden.

ARCHIMEDES: Were it up to us. But it was his fi--his firm wish--

HIERONYMOUS: Or command?

ARCHIMEDES: His firm wish. Please, I am too tired to argue. Let us
pause and put off the coming fight.

HIERONYMOUS: Agreed. I go to find Hieron.

(Exit.)

ERATOSTHENES: Give me your arm, Atlas.

I do not envy your position; the place for a firm footing

diminishes by the hour.

And, like yourself, I do not believe in the efficacy of sacrifices.

GALATEA: The dispassion of geometers terrifies me.
Husband, I will gladly offer our prize bull to the altar, I
will gladly shed the tears you refuse to shed and carry you
on my back if Zeus will be appeased and the rape of Syracuse
forestalled.

ARCHIMEDES: Galatea, you have my leave: go chant the required litany,
sprinkle the proper grain, set the tripods alight. Maybe
your gods will send threatening portents or welcome omens.
For me, this struggle is man versus man, and I soon fear
Carthage versus Archimedes.
I know of no ceremony to change those odds, only calculation.
Ah, I am exhausted.

OFFSTAGE HERALD:

The King is dead! Long live the King!

GALATEA: No!

ERATOSTHENES: Your wife is right, Sand Reckoner; it is time to pray.

(They run off to the palace)

Scene VI

As in Scene IV: before the palace. HIERONYMOUS sits on a throne.

ARCHIMEDES stands nearby. GALATEA and members of the CHORUS are also present.

ARCHIMEDES: My King, there is still a moment in which to pause. Reject this impetuous course of action you have so recently chosen.

HIERONYMOUS: Away, old man. I have listened to you for the last time.

ARCHIMEDES: Listen once more, I beg you in all urgency.

HIERONYMOUS (ignoring him, to HERALD):

Go, fetch the Roman envoy--

ARCHIMEDES: The span of a few words should not tax our endurance to its limits.

HIERONYMOUS: --and tell him the king of Syracuse awaits.

ARCHIMEDES: The king of Syracuse awaits. A figure to strike terror into the hearts of men.

HIERONYMOUS (still ignoring him):

Our enemies shall learn that Hieronymous will not bend.

ARCHIMEDES: He will snap.

HIERONYMOUS: I shall order Syracuse defended to the last man.

ARCHIMEDES: And when the commanders have mutined?

HIERONYMOUS: If my generals refuse, I shall appoint new ones--having
executed the old.

ARCHIMEDES: And when the supply of heads is exhausted?

HIERONYMOUS: If needs be I shall turn to the army.

ARCHIMEDES: And when the captains have fled--

HIERONYMOUS (gradually beginning to listen):

But all this is speculation.

My men are loyal.

ARCHIMEDES: --and the foot soldiers deserted--

HIERONYMOUS: They are loyal.

ARCHIMEDES: --and even the mercenaries cannot be bought--

HIERONYMOUS: Loyal, I say!

ARCHIMEDES: --and when I have had my fill--

HIERONYMOUS (turning on him):

Go, I command it!

ARCHIMEDES: --who will stand beside you?

HIERONYMOUS: I shall raise my sword alone--

ARCHIMEDES: --and they will impale you on it.

HIERONYMOUS: How dare you speak thus?

ARCHIMEDES: Be glad I speak; the enemy will not pause for words.

HIERONYMOUS (suddenly raising a knife):

Neither shall I!

ARCHIMEDES (not flinching):

Strike me, boy, and the vaults of heaven will echo with your
loneliness.

(HIERONYMOUS slowly grows pale, drops the knife, and sinks
onto the throne. ARCHIMEDES reaches out his hand.)

The last man.

HIERONYMOUS (angrily):

Remove your hand.

(ARCHIMEDES withdraws. HIERONYMOUS rises.)

Your pity is repugnant to me. It is but another sign of your
great arrogance.

You, who sits apart, concerned with lines and points and planes,
who barely deigns to mix with common men,
nevertheless finds the temerity to speak to me, of treaties,
loyalty and diplomacy.

ARCHIMEDES: Hieronymous, the meanings of those words are foreign to you.

HIERONYMOUS: I'll have no more of this. Wait. One word I'll yet grant.

Were I truly intended to draw your blood, what would be your
final advice?

ARCHIMEDES: To pause.

HIERONYMOUS: Very well. Now leave me.

(Enter ERATOSTHENES.)

ARCHIMEDES (approaching GALATEA):

The most disturbing thing about that boy is that for
fleeting instants he appears to be a man.

GALATEA: Before he was disturbed; now he is mad. The border has been
crossed.

ARCHIMEDES: Tell me wife, do you resent the arrogance of my mind?
Speak, I give you leave.

GALATEA: Resent, no, that is outside my province.
But your softspoken ways conceal a mighty arrogance, yes.
A boast to move the world is no mark of a self-effacing spirit,
do not fool yourself.
You speak with Eratosthenes as equal, as you spoke with Hieron.
Who else?

ARCHIMEDES: That long-past boast echoes still. Will it never fall silent?
Wife, your considered thoughts also echo--the fast-flung barbs of
Hieronymous.
Indeed, for fleeting instants--

ERATOSTHENES: Archimedes, I interrupt to bid you farewell. I set sail
with the morning tide.

ARCHIMEDES: Your words do not surprise me. I cannot persuade you to
tarry longer?

ERATOSTHENES: No. I have delayed my departure past prudence.

ARCHIMEDES: That is true, it will not be safe here for long. I beg of you one favor: take my wife to Alexandria. I wish to see her protected.

GALATEA: No, I am not so easily gotten rid of, Archimedes.
Who else remains to prick your conscience?
And Syracuse is my home no less than it is yours.
I have lived here and I will die here.

ARCHIMEDES: Stubborn woman. Nevertheless, I yet hope that our deaths
may be peaceful ones.

ERATOSTHENES: You hope past hope.

ARCHIMEDES: I will talk again to the king.

GALATEA: He is past listening.

ARCHIMEDES: Tell me, Eratosthenes, my wife no less than the king claims
me arrogant. Do they see me as I am?

ERATOSTHENES: I am not one to judge, being cast of the same mold as yourself.
But suppose she is right, what of it? How many men have
moved the world?

ARCHIMEDES: Of the myriad words in a life, all but four have been erased.
To move the world. Will no one forgive the
boast of a younger man?

ERATOSTHENES: Forgive? Some boasts need no forgiveness. Now I must go.
Farewell, my friend.

(They embrace. Exit ERATOSTHENES. Enter ROMAN ENVOY.)

HERALD: The Roman envoy, Sire.

ENVOY: King Hieronymous, Rome asks a second and final time, do you
reject a new alliance with Rome?

HIERONYMOUS: For a second and final time I reject it.

My subjects have long wearied of Roman suzerainty, and are
overjoyed to see your empire crumble.

CHORUS: He speaks for us all.

HIERONYMOUS: Then I shall not hesitate to sign a peace treaty with Carthage.

It is welcome, it is prudent, it is considered.

You there, hand me that parchment.

(HERALD hands him parchment and he signs.)

ENVOY: King Hieronymous, I am authorized to tell you that a state
of war now exists between Rome and Sicily.

(Exits.)

CHORUS (Various Members):

Let the Roman legions come.

Roman armor is no thicker than Carthaginian.

Syracusan arrows will pierce it no less.

Italian blood will flow as red.

Let the Roman fleet sail.

Roman ships are no stronger than Carthaginian.

Syracusan catapults will smash their hulls no less.

With gaping holes they will sink as fast.

ARCHIMEDES: I must dissuade him.

HIERONYMOUS: I must tell the Council of my decision. They will greet it
warmly.

(Rises to walk through palace doors.)

ARCHIMEDES: Hieronymous! Burn that fatal treaty. There is yet time to pause.

HIERONYMOUS: Begone old man! I never want to set eyes on you again.

(He exits through the palace doors. ARCHIMEDES halts and stands in center stage. A scream is heard from beyond the doors. ARCHIMEDES rushes through the doors and, after a moment, returns carrying the body of HIERONYMOUS. He is followed by several members of the Council.)

CHORUS: Regicides!

We stand here stunned.

What could have possessed you to murder the King so cold-
bloodedly, who has just severed Syracuse from the chains of a
drowning empire?

COUNCIL MEMBER:

The deed requires no explanation, much less repentance.

Why do you denounce us as regicides when you should embrace
us as liberators?

This boy, whom you call a king, was less than either.

Had you crossed him foaming at the mouth beside a temple
door, you would have angrily brushed him aside with your staff.

But no, this kind picture does not sufficiently well paint the
danger he posed.

Disinherited of his fathers' wisdom, this orphan roamed loose
in some private labyrinth of the mind.

Do not pity him. Do not compare him to Theseus who, with
razor sharp wit and a ball of string, navigated those fatal
convolutions.

No, Hieronymous was the Minotaur, half man, half beast,
devouring with dim reason all who wandered haplessly into
his lair.

Syracuse had already stumbled into the clutches of this raging
monster and would soon have been impaled on its horns.

The only choice was to act as Theseus and act we did: swiftly,
heavily and without remorse.

Mourn not. This day should be a celebration.

Begone, rabble, drink and pour a libation over this carcass until
wine and blood run indistinguishably.

CHORUS: Very well, the deed is done and there was ample justification for
it.

The boy was disturbed, as they say, mad.

A danger to us all, that much is clear.

So now it's back to Rome.

Recall the ambassador while there is still time; intercept him on
the road.

Tear up the treaty, burn even the ashes, and set this errant
course straight.

ARCHIMEDES: So, Hieronymous, it is left to me, whom you despised, a
geometer for whom words are the last tool, to incant a
peroration of high-flown words over your stilled body.
As difficult as it was to bear your taunts and barbs, it is
easy to forgive them.

The gods left you bereft of equilibrium, as if they wished
to see all Syracuse totter with you. To that extent they have
succeeded; I cannot deny it.

But neither can I hold you responsible, you who was merely cast
as the final misfortune in a string of misfortunes that defied
prediction and, I begin to fear, prevention.

Strange, though you numbered me among your enemies--
certainly not among your friends--we were on the same side
of this fight. No person who stands in this courtyard, and
you when you were able to stand, would willingly sound
Syracuse's death knell.

Yet as allies, what we have accomplished? More than our
enemies could ever hope.

Our actions, no less than those of gods, have brought us to the
brink of calamity.

Syracuse totters; she has not yet toppled.

I shall continue on this course that Destiny has chosen for me,
not knowing whether Destiny can be prevented.

And you, council members, now that you have bloodied your
hand with this foul deed, will you at least set things as right as
they can be set and intercept the Roman ambassador?

COUNCIL MEMBER:

No.

ARCHIMEDES: No? My ears have failed me.

COUNCIL MEMBER:

Your ears, old man, are still sharp. We murdered Hieronymous,
not because he rejected Rome's petition, but because he was
mad.

From one day to the next his actions were unpredictable.

Capriciousness is no trait to be tolerated in a king.

The murder could not be avoided.

ARCHIMEDES: Half of Italy has defected to Hannibal. Are they all mad?

COUNCIL MEMBER:

The Italians are prudent, Hieronymous mad.

A moment ago you called him bereft of equilibrium, do not deny
it.

Still, his action of today was, by happy accident, the right one.

Rome is sinking and Syracuse needed to be cut loose.

We stay with Carthage.

CHORUS: Yes, a wise decision.

This is, after all, what we wanted.

To be free of Rome, masters of our own destiny.

Councilors, we give you our blessing.

Let us retire to celebrate,

to drink,

to forget.

(CHORUS begins to exit.)

ARCHIMEDES: Who is in charge here?

(There is no answer.)

Scene VII

As in Scene V: the ramparts of Syracuse. Now a line of mirrors is in place, all the weapons are finished. Members of the CHORUS, armed with bows and swords, man the walls. ARCHIMEDES is also present but he stands apart, uninterested.

CHORUS (various members):

For more than two summers the Romans have camped outside
our walls.

Sicily, but not Syracuse, is theirs.

The rocky inclines, Hieron's buttressed palisades and
Archimedes' catapults, everything conspires to hold them at bay.

And now general Marcellus attempts another storm by sea.

Another.

Look there, galleys approach. How many would you say?

Sixty, no less, with five tiers of oars apiece.

And what's this? Those two in the center, they pull as one.

They're strapped together, somehow, with planks and timbers.

That structure standing astride, shaped like a harp. What is it?

A siege tower, I'd say. He plans to scale the walls.

Hah, we'll flick them off like gnats from our nose.

(Enter GALATEA.)

GALATEA: Archimedes, I've brought you some food.

ARCHIMEDES: Ah, thank you Galatea. I had forgotten how hungry I was.

GALATEA: I managed to find only a few poor fruits. Bread is scarce and
grows scarcer by the day.

ARCHIMEDES: I need not be reminded.

GALATEA: Husband, who commanded defenses so unflawed?
Sicily is overrun by Romans. They reap our harvest and
ravage our flocks.

Only Syracuse holds out. You've made her invincible.

ARCHIMEDES: Yes, it seems I have. But that was the request.

GALATEA: Oh Archimedes, this is the curse of immortality,
to grow old without sustenance and without youth, to age
without end.

I have forgotten the smell of fresh air, the perfume of
flowers as I walk among them in a field, the sound of free
running brooks...

Let the Romans breach these confining walls, let them storm
this city...

I will offer them my throat to slit and pour my own blood
into their victory chalice, if only you will make an end.

ARCHIMEDES: On that far-past evening, when I debated Eratosthenes, you

sided with him and urged me to serve my King. All Syracuse participated in that urging until I gave way.

Do you now curse my weakness?

GALATEA: Forgive me, husband. I did not foresee this aspect, that your shield would also become our prison.

And there is something else...

ARCHIMEDES: Speak. I am listening.

GALATEA: I cannot say it well. Before, the men compared you to Atlas, who shouldered the heavens. This year you are Prometheus...

ARCHIMEDES: Pay no attention to the epithets bestowed by mortals.

GALATEA: There, that is what I mean.

You pronounced those words from a great height.

It is again your boast to move the world.

To storm the sanctuary of gods is your second nature. Such hubris--the word was coined in for you--terrifies me.

ARCHIMEDES: I terrify my own wife?

GALATEA: The word is perhaps shaded too strongly, though large parts of Archimedes have always lain beyond my ability to comprehend them.

ARCHIMEDES: You make me sad.

GALATEA: I did not intend to. Husband, this cannot be news to you.

I merely wanted to say...

ARCHIMEDES: Yes?

GALATEA: If you are defending Syracuse out of pride, to show that it can be done, it is time to humble yourself.

ARCHIMEDES: Wife, you are unfair despite your kind intentions. How long did I resist, how long did I fight this action, until I finally crumbled? I am compelled by hateful necessity.

GALATEA: There is no more necessity.

Oh, again forgive me, husband. I do not know what I am saying. My complaints are the outbursts of a spirit beyond weariness. I have given up hope.

CHORUS: Archimedes, the Romans approach!

ARCHIMEDES: Galatea, you must leave these ramparts.

Go home now and rest. I will meet you when the danger has
passed and renew your strength.

(They embrace. Exit GALATEA. ARCHIMEDES approaches the walls.)

Yes, here they come, right up to the walls, thinking that my mighty catapults will overreach them.

Drop that rock, direct it downward, and show them how feeble
our cast can be.

CHORUS: A hit, straight through the hull.

The ship sinks, a deadweight for Poseidon.

ARCHIMEDES: Now, lower that claw; make sure it snares the mast.

Careful, that's it. Good.

Now pull, all of you, on these ropes. Pull hard, as you were
opening the Trojan gates.

Look there, the ship rises majestically.

CHORUS: She twirls and dangles like a bauble on a thread...

...trailing diamonds.

Hey, see the crewmen lose their footing and dive helter-
skelter into the water.

That one's lost between two galleys. His bones are crushed
to meal.

Archimedes, that infernal siege tower approaches quickly.

What shall we do?

ARCHIMEDES: An experiment I've long wished to perform. The mirrors.

That floating contraption is not yet infernal but, with the help of
Apollo, it soon shall be.

Find the sun and change its course seaward. There, bring
the rays together on the base of that tower.

(The mirrors are turned on the audience.)

Steady now, you must hold steady.

CHORUS: Smoke, I see it, she begins to rise.

The tower smoulders like kindling.

Ah hah, the flames flames begin to dart, look there!

You've hurled the sun across the sea, as if were a rock
devoid of weight.

This exploit of yours will be passed down the centuries,
from the lips of fathers to sons.

It is a miracle.

ARCHIMEDES: No miracle, mirrors.

But now it is time for more ponderous stones.

Train the catapults on that tower and smash it to bits.

(Some indication should be made of catapults firing in
succession.)

CHORUS: One hit,
another,
and yet a third.

The tower crumbles.

The men scatter...

...in terror.

ARCHIMEDES: Now your bows, do not hesitate.

Pick them off.

CHORUS: Fly, arrow, let Athena's hand guide you to the mark.

Fly, arrow, do not spare your your intended victim.

Fly, arrow, fly to Rome.

What's this? The fleet's turning around in disarray.

The oars are entangled--

Their tempers' flared. You can see the red flush from here.

A fight has broken out between two galleys. Soon they'll

smash themselves to bits.

So be it. They're retreating again. I expect this will be

the last time.

Geometer, you must be pleased.

ARCHIMEDES: Why?

CHORUS: You've defeated Rome single-handedly.

Now they've gone. Your hour of respite has come.

Return home and with stylus record these events for posterity.

Describe your mechanisms in every last detail, so that
future generations may profit from your genius.

ARCHIMEDES: I'll leave not a trace.

CHORUS: Why, we cannot understand this. Is it because you regard
these inventions as mere playthings, suited only for children?

ARCHIMEDES: No, because they disgust me.

(Attempts to leave.)

CHORUS: Wait, we will not let you off so quickly.

Do you deny your blood rose in the excitement of battle?

ARCHIMEDES: Begone, I have no more to say to you.

(Exit.)

CHORUS:

Ah well, the battle is over, the Romans in retreat.

Syracuse has won the day and, what's more, on the eve of

Diana's festival.

No better excuse to celebrate could be found.

So then, crack the jugs and let's homage begin to pay:

Let the wine flow and wash away all memories painful,

Of wars,

Of sieges,

Of hunger,

Of pain.

Then goblets we'll raise, in thanks,

To Archimedes,

To Artemis,

To Bacchus--

To drink!

Scene VIII

Night. A path outside the gates of Syracuse. Drunken revelers can be heard in the distance. Downstage, left, is ARCHIMEDES. He sits on a stone at his wife's grave, absently tracing the ground with a stick.

TWO DRUNKS (shouting from gate):

Hey, old man, don't you know it's sinful not to celebrate the
feast of Diana?

Ah, he's too deaf to hear. Let him be.

(Exit.)

ARCHIMEDES: These light-headed revelers call me to celebrate, but they are unburdened by the persistence of memory, the consequence of action, the reverberation of deeds.

With as much of a smile as I could force, I would gladly celebrate the end of misfortune, were celebration due.

I would concede to Hieron and Eratosthenes their foresight:

Yes, the deed, seeming beyond doing, was doable. I admit it.

Yet, when I look out over this field crowded with corpses, the exultation of triumph somehow contracts to the wheeze of

parched lungs.

Hieron and Eratosthenes would with reluctance accept such a feeble capitulation.

But they are gone.

(To grave):

And now you too have departed, you who never fully comprehended the stranger in your house, leaving him to travel a strange world he never fully walked in.

Ah, this voice speaks from beside, as if to an orphan.

But I am far from alone. I am accompanied at every step by grief, a grief so measureless that my mind cannot encompass it, a grief more boundless than sandgrains in the universe.

Wife, where was your strength? Why could you not have held out for fleeting moments longer?

Were you overwhelmed by hunger? Then why did you not speak a word?

I would have stolen bread from the troops to feed you; they would not dare accuse me of thievery.

Was your silence then spite for long neglect, for defending Syracuse when I might have given you my arm?

Or did you die to perform an act of hubris to outshine that hubris you found so deeply burnished in me?

To move the world.

Perhaps I exclaimed it once, in a moment of drunken euphoria;
I did not expect the words to be passed from lip to lip until they
girdled the earth.

And now I see that this boast will be chisled on the centuries.

Galatea, I would like to think that you died neither in the
pangs of hunger, nor with spite in your heart, nor raging at
the arrogance of gods or Archimedes.

I would like to think you died peacefully after a long life and that
a few rays of light penetrated the shadows cast by wars and
husbands.

You were not my first love; you knew this and I cannot
apologize.

Forgive me now that I turn from you to her.

I thank the gods for lightness.

(He turns to the ground and begins to work out a
mathematical problem with the stick in his hand.)

(Enter ROMAN SOLDIERS.)

FIRST SOLDIER: The cliff was steep but not so steep that it could not be scaled.
Just the thing.

SECOND SOLDIER: The Syracusans are all dead drunk. Even the watchtower's
deserted. They don't expect an attack from behind.

THIRD SOLDIER: Quietly now.

You two take the tower and signal the rest.

I'll guard the gate.

(Two SOLDIERS climb the tower and begin to signal with a lantern. The third catches sight of ARCHIMEDES who is totally absorbed in his calculations.)

SOLDIER: Old man, what are you doing here? Move on if you fear for your
life.

ARCHIMEDES: Step elsewhere boy, this problem has yet to be solved.

SOLDIER: I won't ask you again.

ARCHIMEDES: Step aside, I said.

SOLDIER: Very well, old man.

(He slays ARCHIMEDES with his sword and raises it in
triumph.)

Romans! Syracuse is ours!

Curtain

