

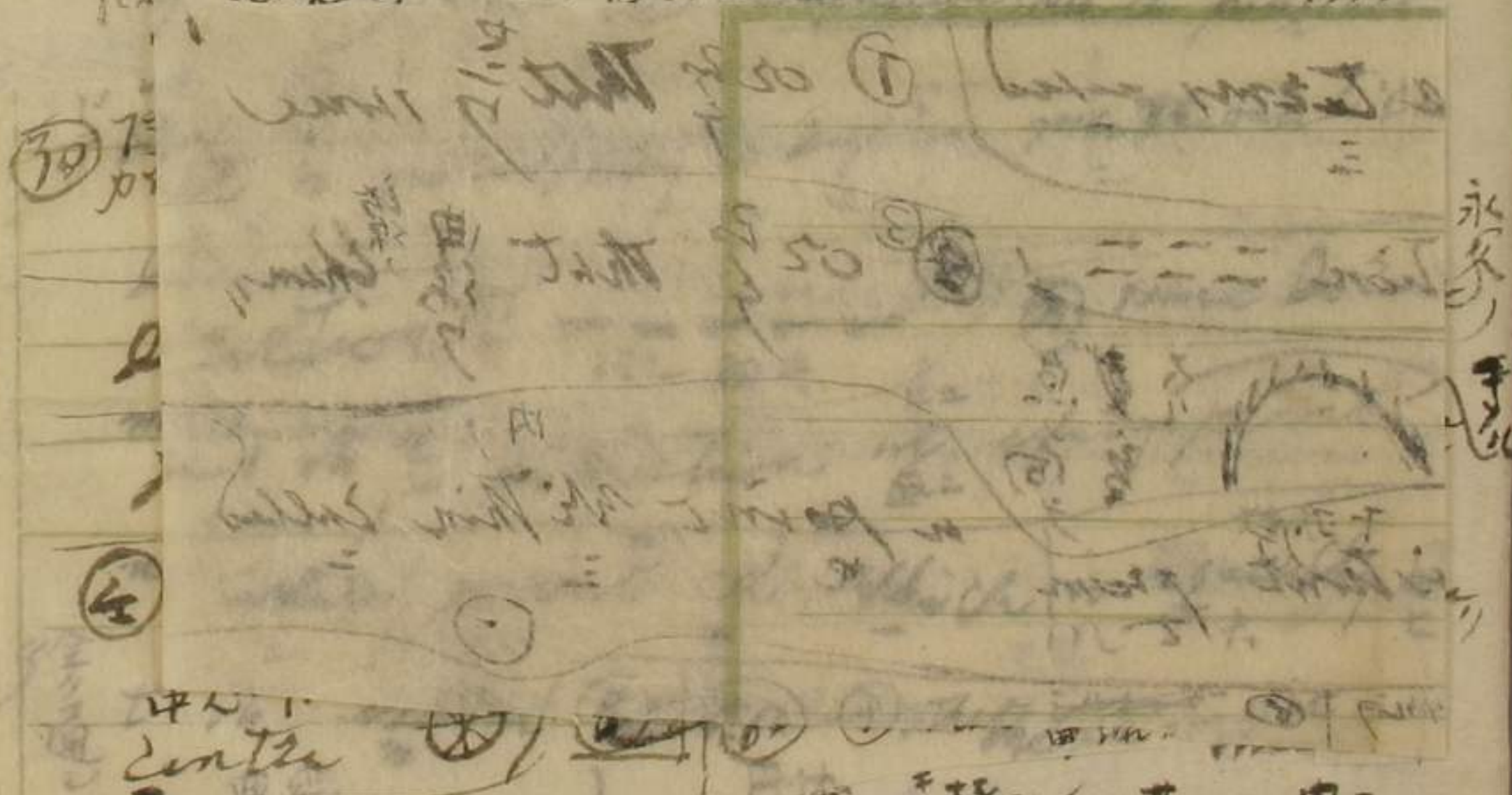
洋学文庫
文庫 8
E 173
 2



⑤ pigeon in velocity which remark de.
 ⑥ nominations reduced current rapid run
 horn moderate hot which ⑦ straws that
 ninesth circumference it rate ⑧ bombs
 Edmund outland coast holland heard london
 travels cannon fired ostend repeated
 ⑨ base pyramid checks its
 top it long island it walking per ⑩ ruff
 ball it maintain it crossing Atlantic Ocean
 ⑪ long before flash lightning about off
 object side search my laster ascended ball
 ⑫ some desert he descent ⑬ Alpine
 glaciers usually far ⑭ comet observed motion
 pyramids

出た 22
Assistant 行

⑮ which hurricane miles in hour in 2 hours
 ⑯ orbit ⑰ completing revolution
 ⑱ my travels ⑲ battering-ram whipping motion
 to compare little less striking compare their
 comparative effect wall portall that ⑳ ice
 200 weighing tons avalanche descends velocity
 the stacks 200 m...
 ⑳ center that ㉑ circles bounded within
 center ㉒ circumference that it will
 right

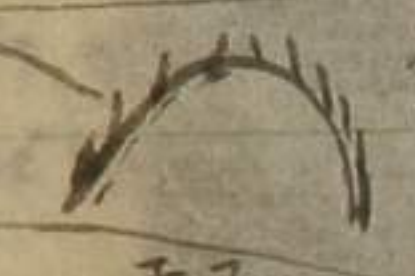


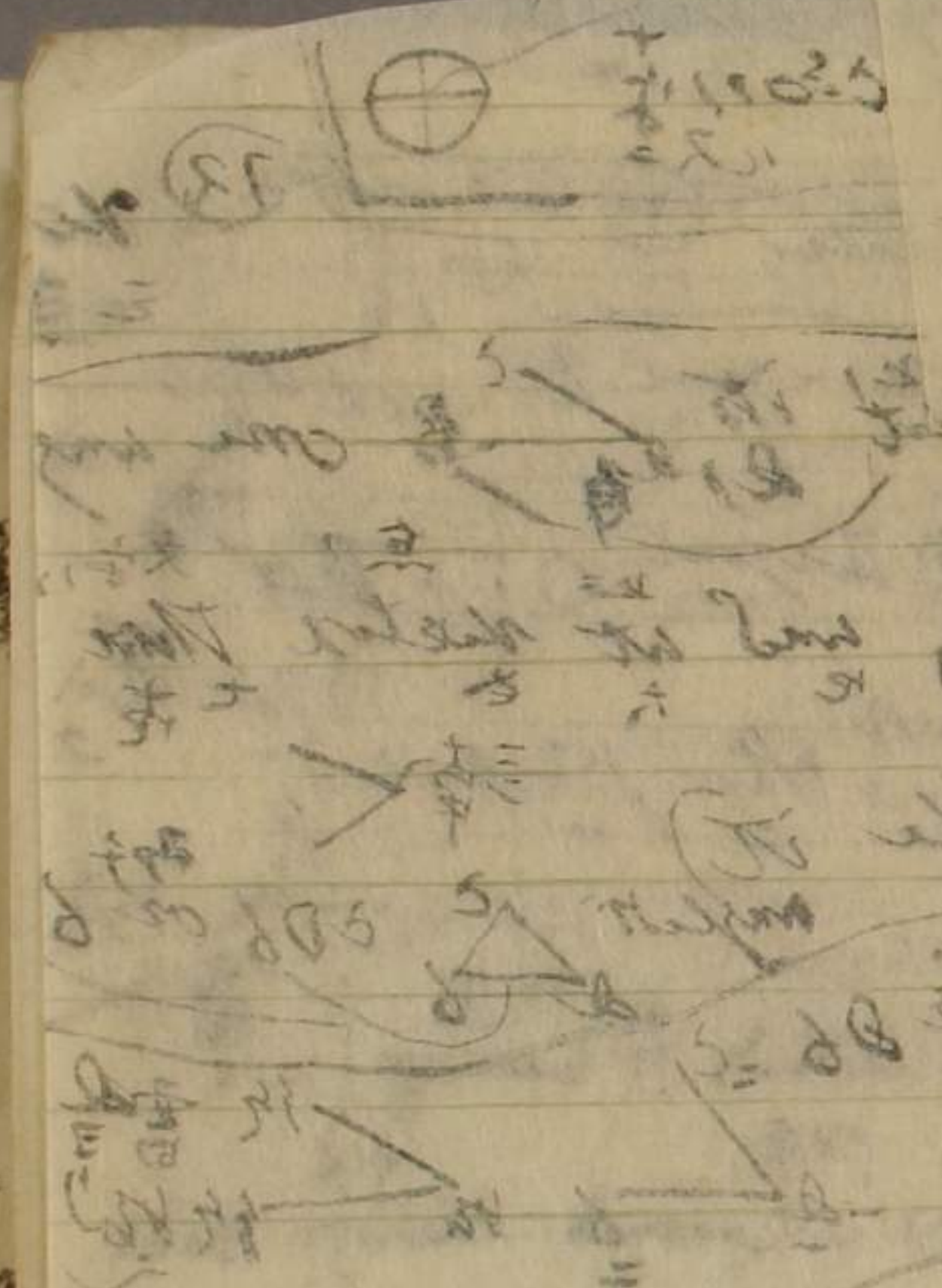
④ pigeon in velocity which remark be.
 ⑤ nominations reduced current rapid run.
 ⑥ horn moderate foot which ⑦ struts that
 ninesth circumference it rate ⑧ bombs
 Edmund outera coast holland heard london
 ⑨ traps cannon fired stand up
 ⑩ after heard ⑪ base pyramid cheaps its
 top it long island it walking per ⑫ ruff
 ball it maintain it crossing Atlantic Ocean
 ⑬ long before pluck lightning about off
 object side ⑭ perch my lumie ascended ball
 ⑮ some down he descent ⑯ Alpine
 glaciers annually per ⑰ comet observed motion
 pyramids

出た 202
Assistant 了

⑮ which hurricane miles in hour in 4 hours
 locomotive ⑯ orbit ⑰ completing revolution
 ⑱ ray tracks ⑳ bathing-rum shipping narrow,
 the compare little can striking compare their
 comparative equal wall portion - that ㉑ ice
 ㉒ weighing tons avalanche descends velocity
 the striking force ㉓ momentum which antit.

⑳ put is necessary to define mathematical terms used
 direction some direction
 ㉑ that of some
 ㉒ that of some
 ㉓ a point within called
 ㉔ that
 ㉕ center that ㉖ circles bounded within
 center ㉗ circumference that it
 right





⑪ that
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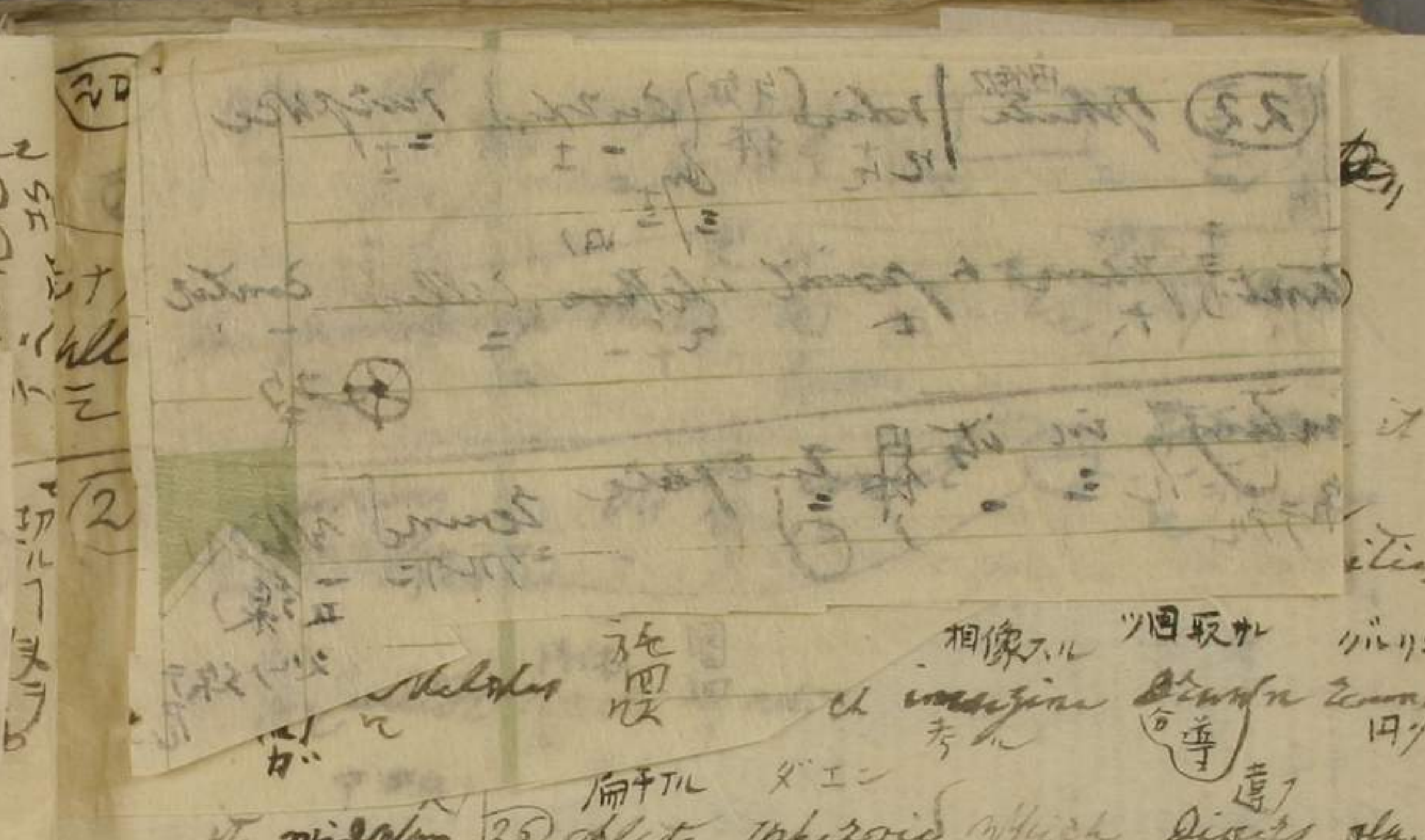
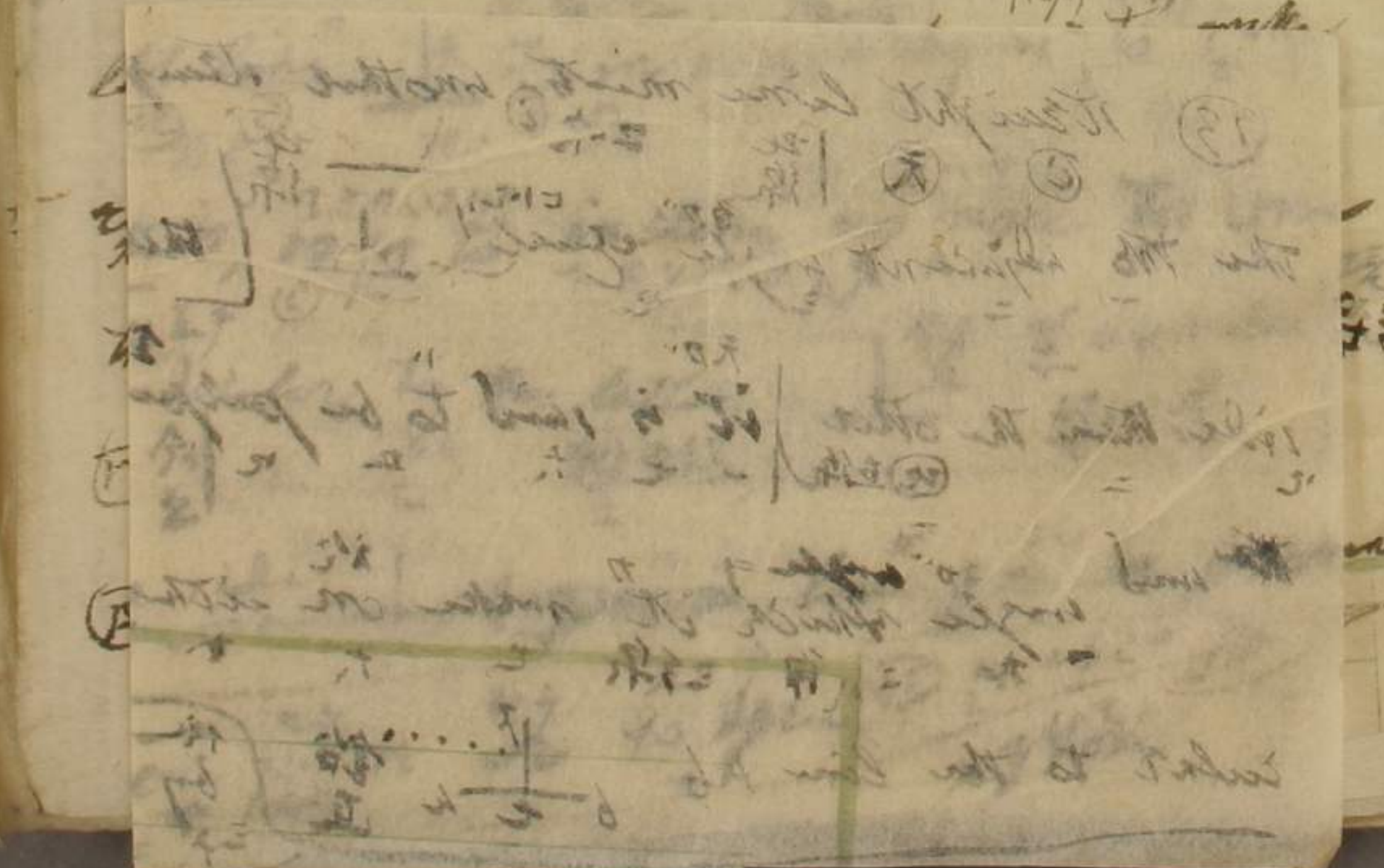
each

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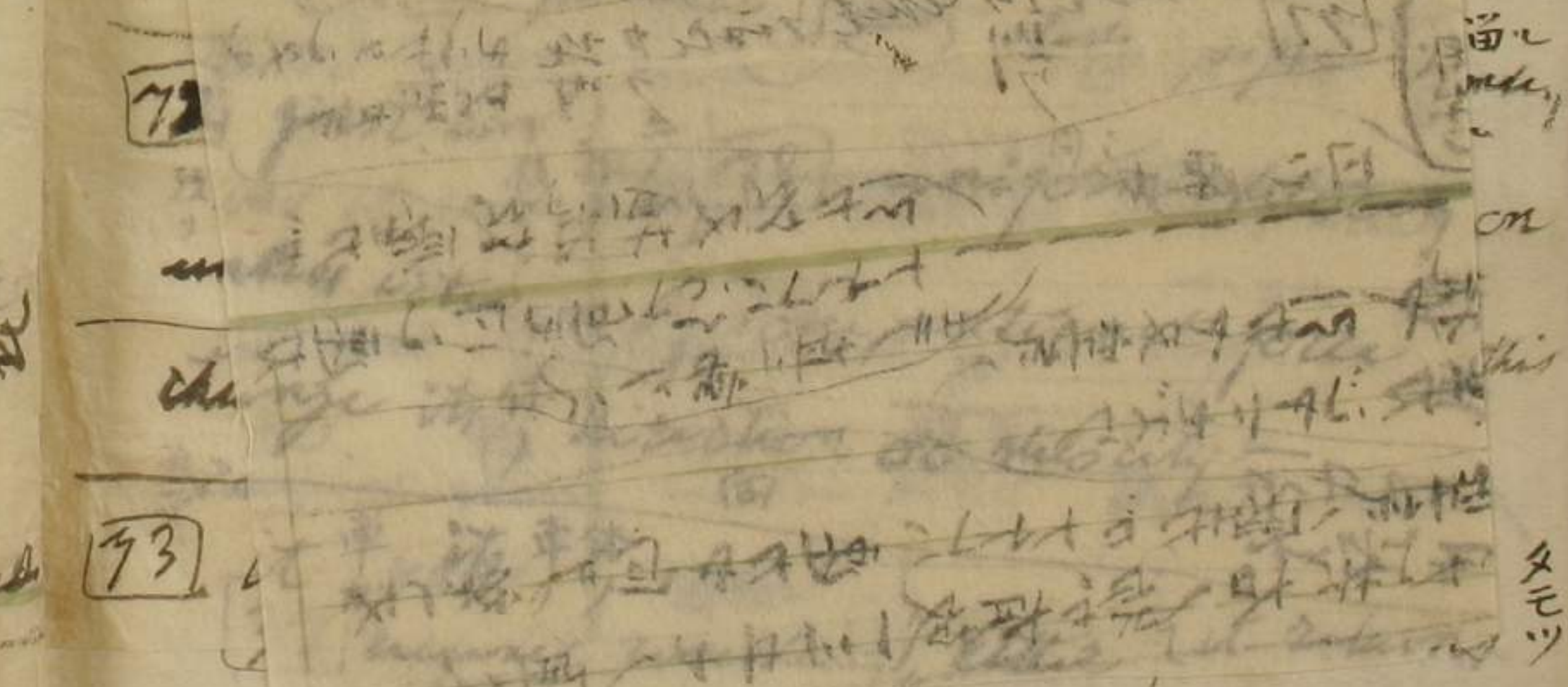
its sides simply extend choose ⑬ adjacent

incline 10 4/6 no more to its perpendicular



②5) great circle

oblite spheroid which depicts plan



②3)

cylinder

since

11

that line

must

angle

each

note that

the size of

Through the center of diameters all equal to each other

Tangent that angle point

at either end then produced

the size of DC or DB

they circle has an infinite number

named after these other

but middle distinguished

its sides simply extend choose

inclined so as to be no more to it perpendicular

that is, so as to be inclined no more to one

side than the other it is said to be perpendicular to the latter

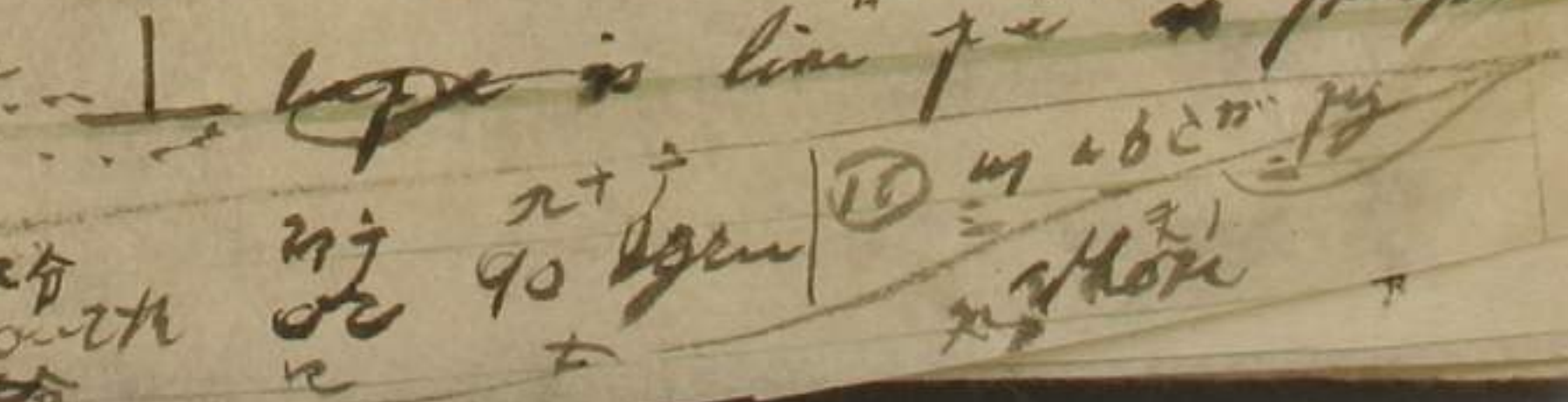
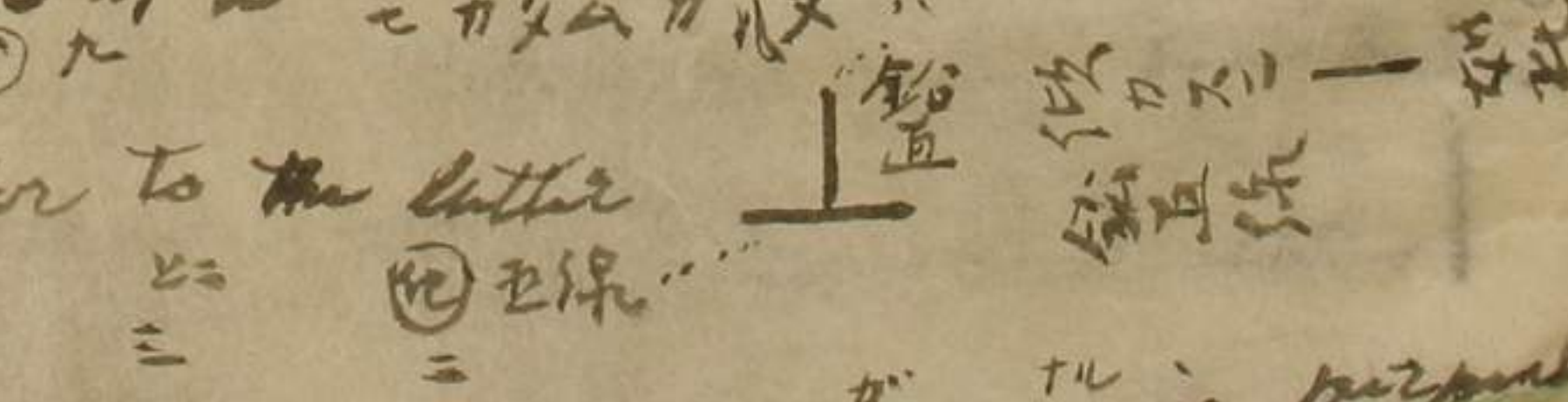
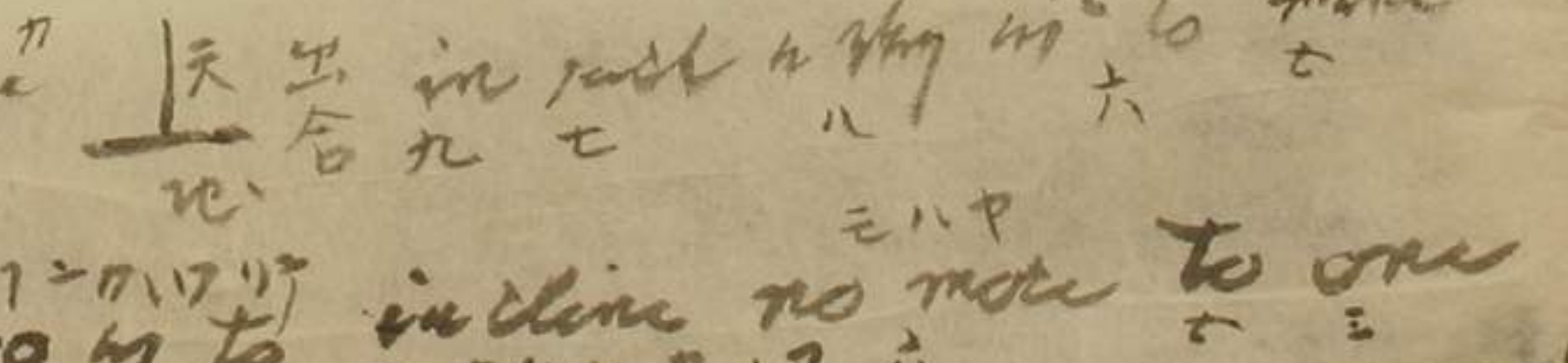
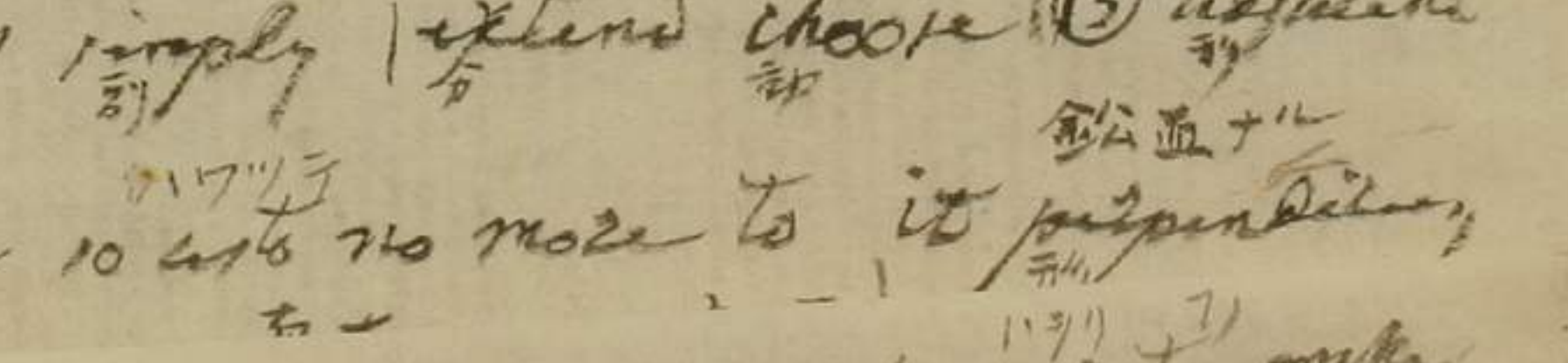
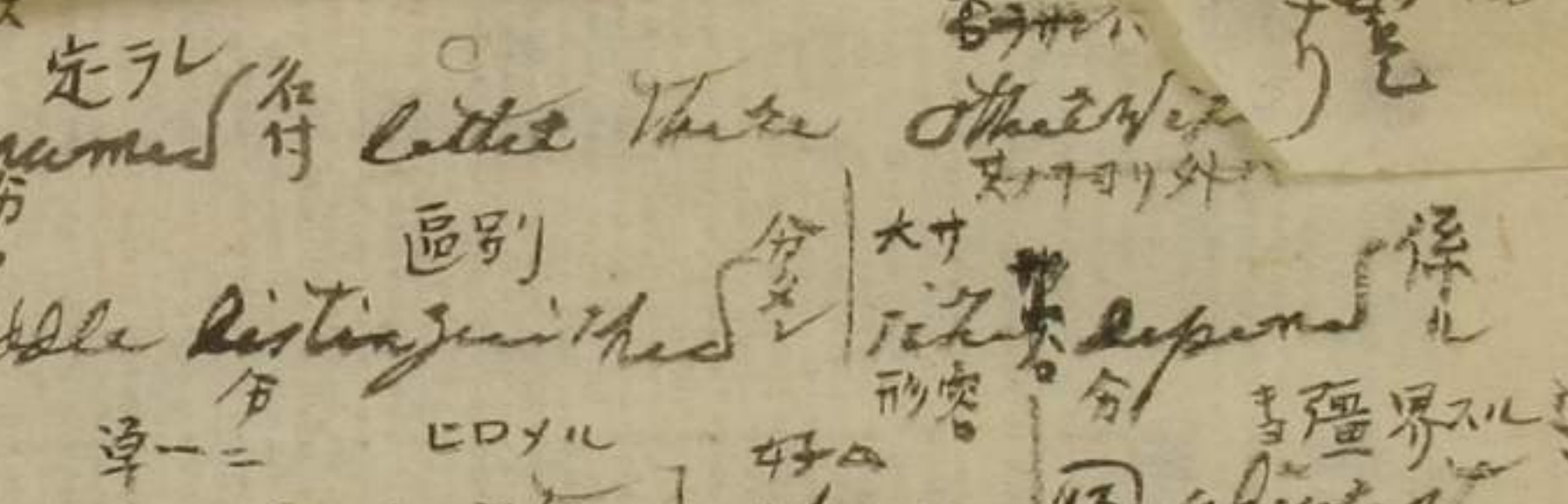
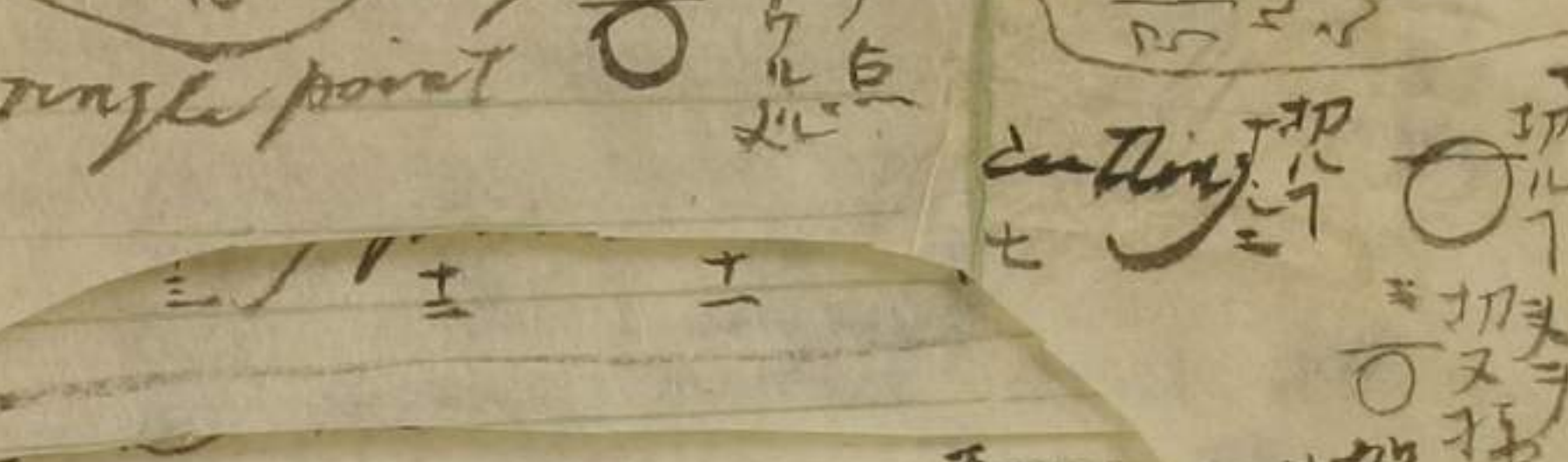
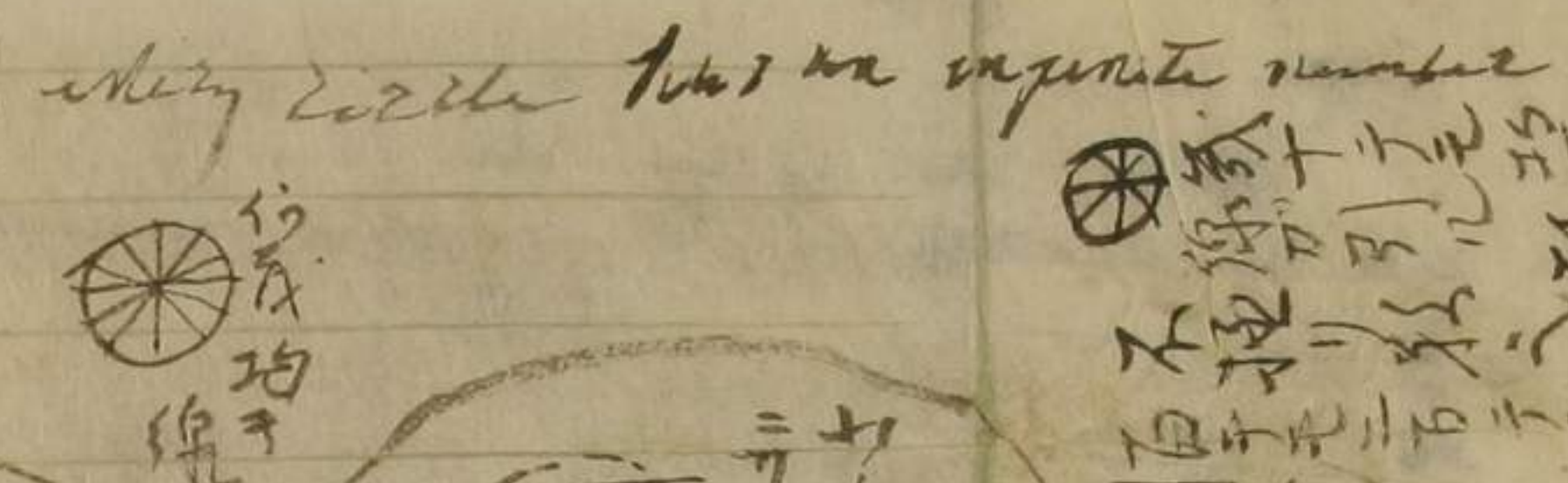
and angle which it makes on either side

it is said to be perpendicular to the latter

and angle which it makes on either side

inclined to the line AB

by one fourth



20

all

2

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25

2

2

72

72

73

73

73

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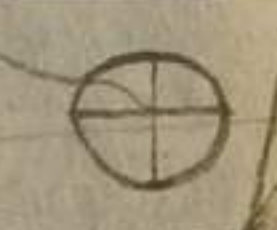

Handwritten notes and diagrams on the middle right page.

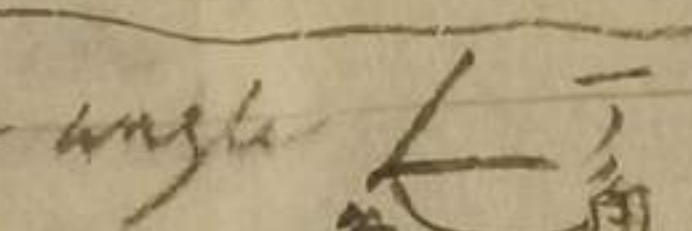
Handwritten notes and diagrams on the bottom right page.


Handwritten notes and diagrams on the bottom right page.

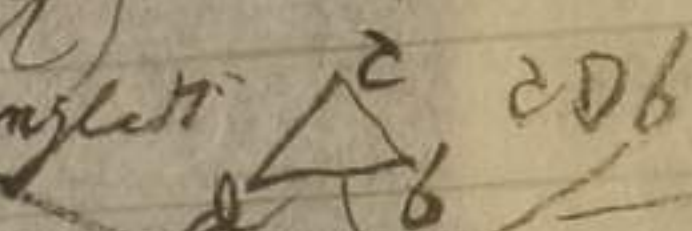
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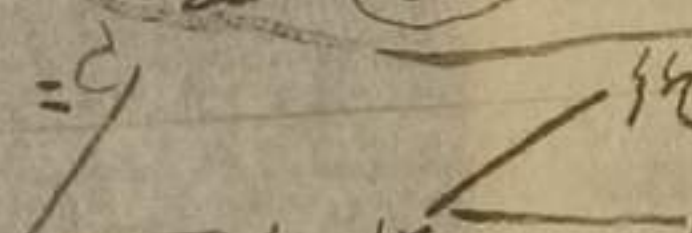
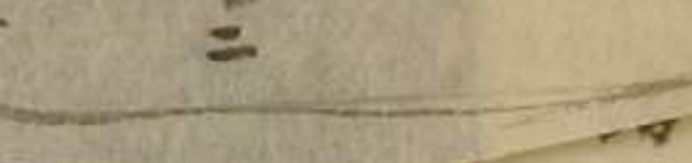
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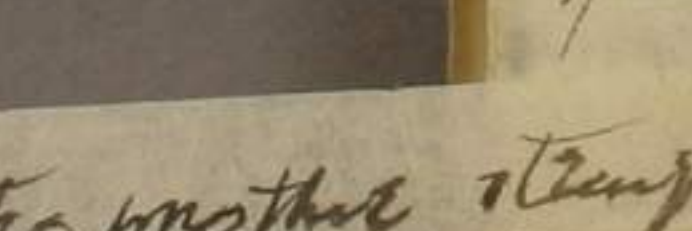
⑪ that must be δ  δ 

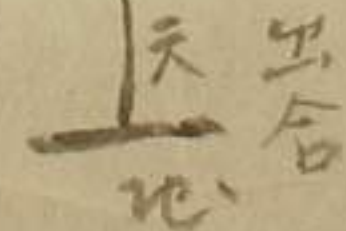
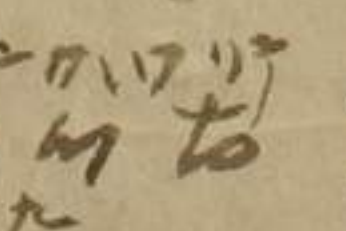
⑫ vertex of angle δ at which δ  other side δ it δ letters δ

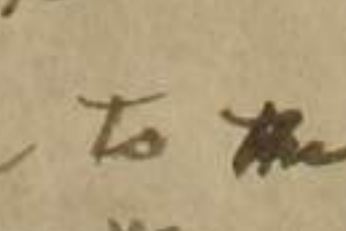
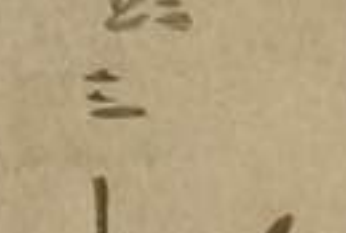
⑬ vertex being placed in the middle 

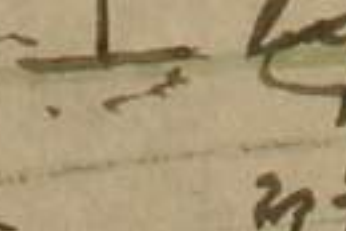
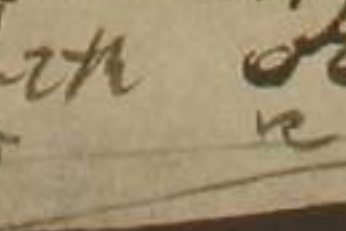
⑭ the rule of δ or δ δ 

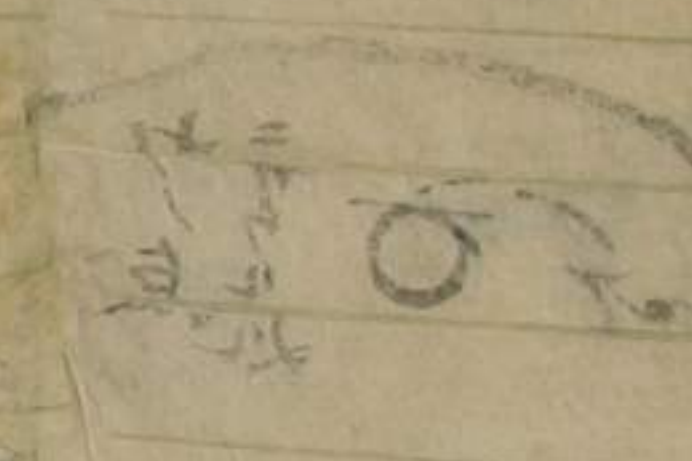
⑮ δ  δ 

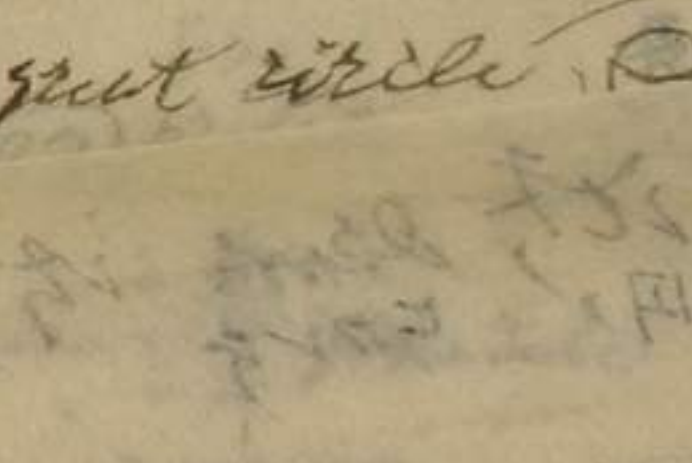
⑯ δ  δ 

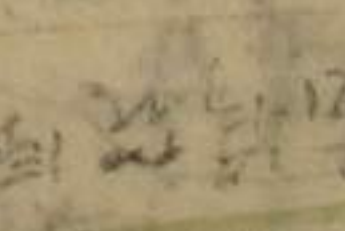
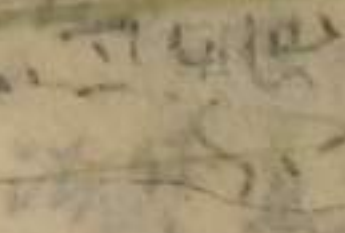
⑰ straight line meets another straight line \perp  \perp 

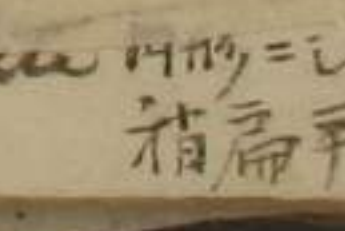

⑱ that is, so as to \perp  \perp 

⑲ \perp  \perp 

⑳ oblate spheroid 

㉑ great circle 

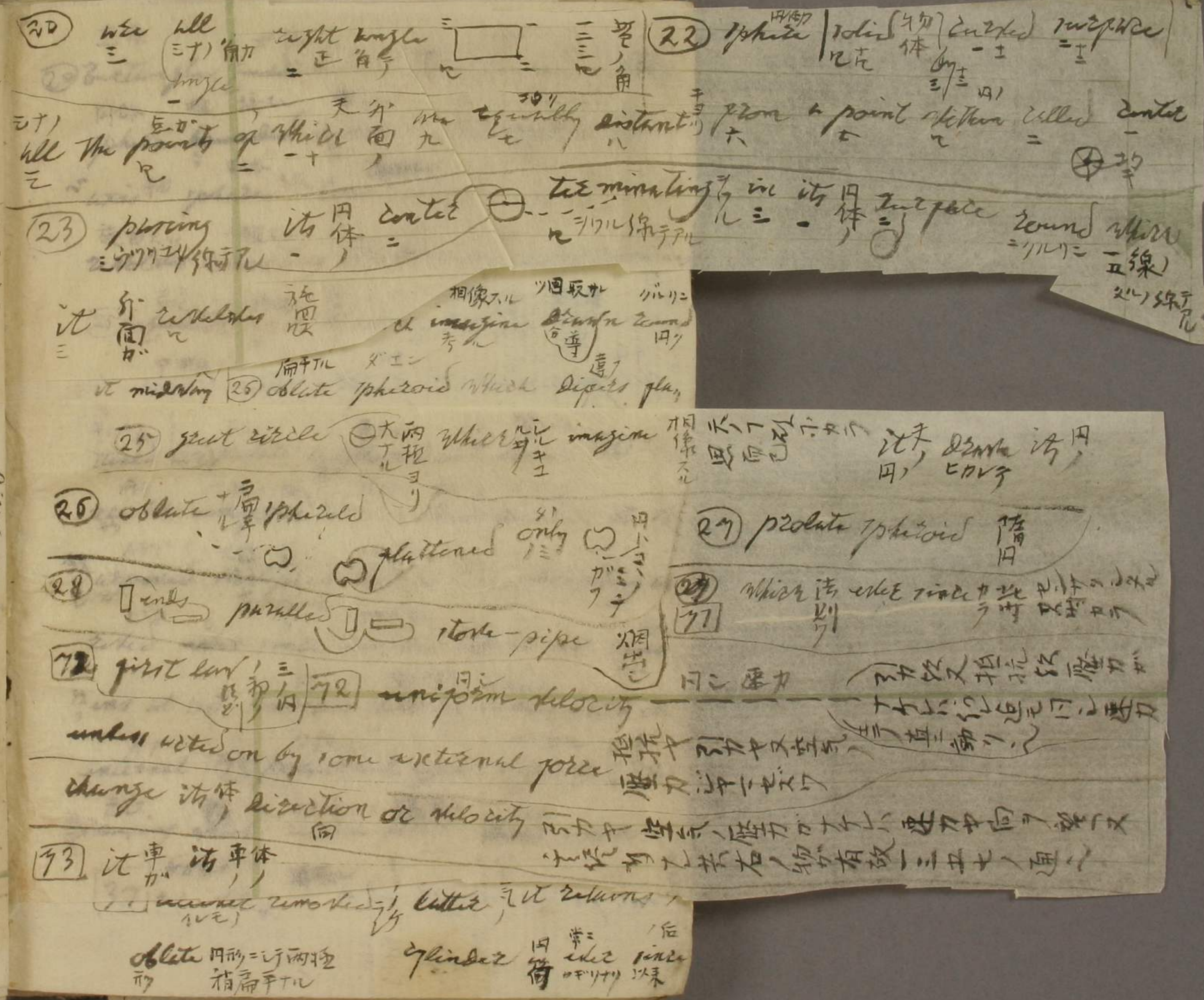
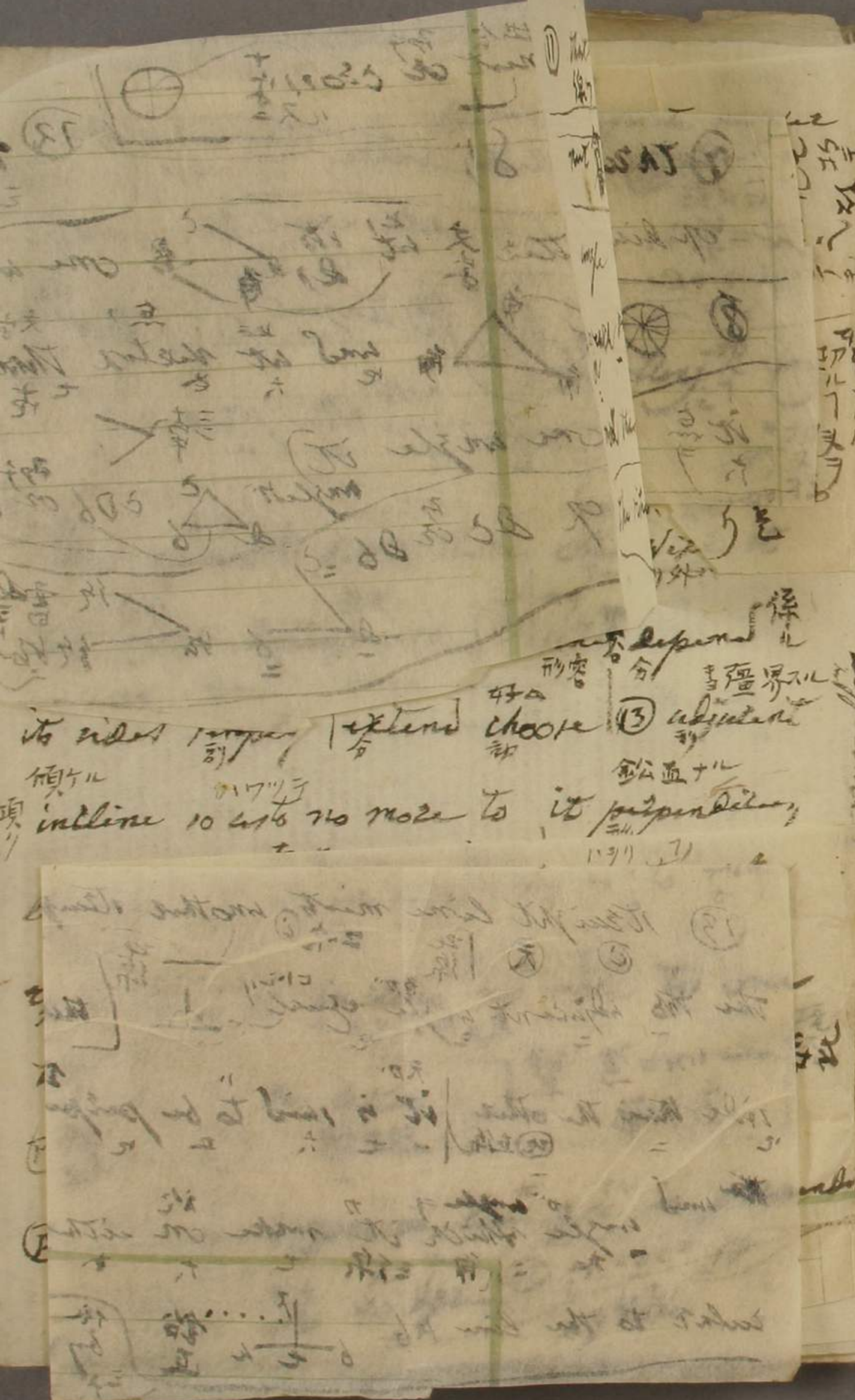
㉒ \perp  \perp 

㉓ \perp  \perp 

21) all the points of which are equally distant from a point called center
 22) sphere solid curved surface
 23) passing through center terminating in its surface round when
 24) great circle
 25) oblate spheroid which dips flat
 26) oblate spheroid flattened only
 27) prolate spheroid
 28) tanks parallel stove-pipe
 29) which edge radii
 70) first law unless acted on by some external force change its direction or velocity
 71) uniform velocity
 72) unless acted on by some external force change its direction or velocity
 73) it is a cylinder

20) we call right angle
 21) all the points of which are equally distant from a point called center
 22) sphere solid curved surface
 23) passing through center terminating in its surface round when
 24) great circle
 25) oblate spheroid which dips flat
 26) oblate spheroid flattened only
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 70) first law unless acted on by some external force change its direction or velocity
 71) uniform velocity
 72) unless acted on by some external force change its direction or velocity
 73) it is a cylinder

Oblate cylinder
 cylinder



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直角 四面 平方
 20 *Bertangle quadrilateral* 27 square 28
 円体 柱 坑スル 曲ラレ 円=。
 sphere bounded curved solid within 29
 axis 軸 sphere 球 terminating round which it
 旋回スル 一致スル 極 円体
 revolves connecting 24 poles sphere extremities
 赤道 円体 圓 相像スル ツ四取ル 丸リニ
 25 equator circle which imagine drawn round
 it midway 26 oblate spheroid which depicts flat
 中夾ヲ 扁平ル 欠エニ 遠
 27 prolate lengthened out lemon 28 2c
 平ヲ加 平ヲ 長メル 楕圓
 regular uniform circles lens-shaped it the
 鏡 石リヲ 火鉢 唇〇 ナカノホ センヤリ
 29 exposed stop-pipe hollow 30
 21 raked after since revised 32 at rest
 残 同シ 動カレ 797211
 ins at rest uniform velocity which acts on
 external 33 portulugent stopping this
 起 輪 手 旋曲スル 樞軸
 changing wheel revolve pivot that under
 37 4021 清軟 11 折 夕モツ
 wheel removed, latter, it retains
 Oblite 円形ニシテ兩極 筒扁平ル cylinder 筒 4021 以テ
 而 筒 筒

Handwritten notes on the left page, including a table with columns and rows of text. The text is dense and appears to be a list or a set of instructions. Some words are circled or underlined. There are also some small diagrams or sketches interspersed with the text.

Handwritten notes on the right page, including a table with columns and rows of text. The text is dense and appears to be a list or a set of instructions. Some words are circled or underlined. There are also some small diagrams or sketches interspersed with the text.

Changes it attach cord posturing --

Drop of water

suspended by cords become tightly

it is cannot escape

it spread up the

idly - stop

closed

tightly

escape it

round

23) friction exists when solid body meets from surface on which it moves

rougher surfaces brought in contact, the greater the friction is

the smoother the surfaces the less the friction

75) to this end body left free to obey the force that put it in motion

we observe free motions in nature all the bodies acted their

by other forces besides those that put them in motion the tendency of the

moving body however is always to continue in a straight line unless it is

checked it attach to a surface

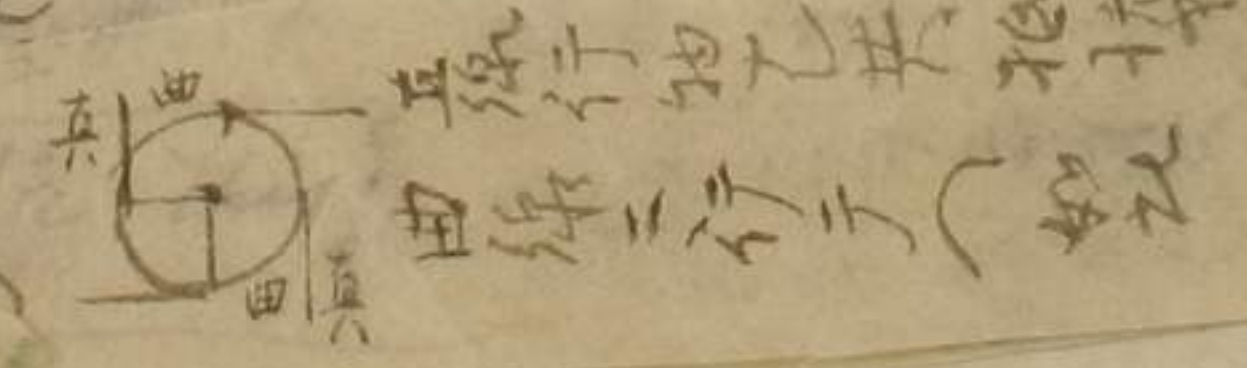
attach impulse end of the cord to it
 distance of the centre where it not
 it is held more thus

20) ...

the ...

77) familiar ...

Drop of water ...
 suspended by ...
 it spread up ...
 it is ...



...
 ...
 ...
 ...

20) friction exists when which body meets from surface on which it moves
 摩擦存在 当何物与表面相遇时
 摩擦係數 = $\frac{F}{N}$
 roughness brought in contact, the greater the friction
 粗糙度 引入接触, 摩擦係數越大
 the sooner the moving body will come to rest
 移动物 将 停止 越早
 it will be stopped by the obstacles it encounters
 它 将被 障碍物 阻止
 it goes and further this is because friction becomes less in proportion
 它 越 走 越 远 因为 摩擦 随着 比例 减小
 as the surface on which the ball rolls becomes smoother
 随着 球 滚动 的 表面 变得 更 光滑

21) according to the theory of the tides
 根据 潮汐 理论
 the water on the earth's surface is in motion
 地球 表面 的 水 在 运动
 and the water on the surface of the moon is also in motion
 月球 表面 的 水 也 在 运动
 and the water on the surface of the sun is also in motion
 太阳 表面 的 水 也 在 运动
 and the water on the surface of the planets is also in motion
 行星 表面 的 水 也 在 运动
 and the water on the surface of the stars is also in motion
 恒星 表面 的 水 也 在 运动

22) the distance of the centre of the earth from the sun is 93,000,000 miles
 地球 中心 到 太阳 的 距离 是 93,000,000 英里
 the distance of the centre of the moon from the earth is 238,900 miles
 月球 中心 到 地球 的 距离 是 238,900 英里
 the distance of the centre of the sun from the earth is 93,000,000 miles
 太阳 中心 到 地球 的 距离 是 93,000,000 英里
 the distance of the centre of the planets from the sun is 37,000,000 to 5,000,000,000 miles
 行星 中心 到 太阳 的 距离 是 37,000,000 到 5,000,000,000 英里
 the distance of the centre of the stars from the sun is 4.2 to 25.3 light years
 恒星 中心 到 太阳 的 距离 是 4.2 到 25.3 光年

23) the force of gravity is the force which attracts all bodies towards each other
 重力 是 吸引 所有 物体 相互 吸引 的 力
 the force of gravity is the force which attracts all bodies towards each other
 重力 是 吸引 所有 物体 相互 吸引 的 力
 the force of gravity is the force which attracts all bodies towards each other
 重力 是 吸引 所有 物体 相互 吸引 的 力
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24) the force of gravity is the force which attracts all bodies towards each other
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 重力 是 吸引 所有 物体 相互 吸引 的 力

birds that

pendulum vibrate nearly exhausted circuit

friction resistance must which it

the contact friction roller over it

at this friction proportion rolls smoothly

accordingly it obeys that it

starts ascending with besides those that sit

them | tenderly continue when descending

changes it attach cold protruding end

pulse guide | it to it within center it

not for this | it cut at A it tangent fly off

left piece

Handwritten notes on the top right page, including mathematical symbols and diagrams.

Handwritten notes on the middle right page, including mathematical symbols and diagrams.

Handwritten notes on the lower middle right page, including mathematical symbols and diagrams.

Handwritten notes on the bottom right page, including mathematical symbols and diagrams.

Handwritten notes at the bottom of the right page, including mathematical symbols and diagrams.

① tends to make a body fly round when it revolves

the opposite force which holds it

successive point in distance

centrifugal force they tend to fly off in tangents, disturbing the harmony of the universe

they carrying evolution

they are constantly sustained by centrifugal force equally powerful

② familiar examples

Drops of water propelled by this force

suspended by cords pulled round the rim

it spread up the sides

Vertical column of handwritten notes on the left page, including diagrams and mathematical symbols.

Handwritten notes at the bottom of the right page, including a diagram of a circular path and a small sketch of a water droplet.

[Faded handwritten notes and diagrams on the left page, including a circular diagram with arrows and various illegible text.]

to make body fly
 76 Centripetal tends which fly round which
 it revolves opposite round towards center
 trip - a - tal magnificent 38 planets revolve
 orbiting it with successive orbits obedience
 they tend fly off tangents disturbing harmonies
 my mistake carrying evolution path they
 constantly restrained centripetal equally
 powerful attraction result that they revolve
 the curves which that not rapidly - prop
 elled it fly off suspends containing colored
 25 pushed round rim or turn round tightly
 ited become let it go it rapidly - revolves
 centripetal impulse why let it escape it
 pushed round

instant 貝石釣 round
陽ナニル 貝石釣 round

Handwritten notes on a piece of paper, including the word "instant" and some illegible text.

Handwritten notes on a piece of paper, including the word "round" and some illegible text.

Handwritten notes on a piece of paper, including the word "instant" and some illegible text.

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instant 瞬間
slip 滑動
round 圓

It is whirled quickly round
is prevented from leaving by the strings connected with the stamp on which it
the instant one of the strings is let go
its direction varies

it is liable to be upset
feels his body taking outward
and one of his feet is his to grasp when to avoid being thrown from his place
centrifugal force
is laid higher
for his precaution

39 train

instant
that he may counteract the centrifugal force
circum-rider going rapidly has to lean towards the center

Handwritten notes on the top right page, including a diagram of a circular path with a central point and a radius line.

Handwritten notes on the middle right page, including a diagram of a circular path with a central point and a radius line.

Handwritten notes on the bottom right page, including a diagram of a circular path with a central point and a radius line.

Handwritten notes on the bottom right page, including a diagram of a circular path with a central point and a radius line.

ツ instant 貝石 sling 釣 輪 round

spread enough it whole advantage centrifugal

discharging stone sling whirled hand as whirl

it prevented loosing strings, stamp on which

it rests instant centrifugal carrier off stone the,

just while it describing it according which upper,

we communicated this apparatus persons rhodians

and all nations formidable weapon weapon

it rapidly it liable upon consequence centrifugal

it falls when outwards on feet jump avoid

counteract effect either railroads outer rail

could inset it this production 39 train

itly curve track instant tracks running rapidly

inclined instead that he counteract center,

傾り 傾り 傾り

Multiple pages of handwritten notes on the right side of the notebook, including diagrams and dense text.

instant 瞬間
 sling 釣帶
 round 圓

is pre
 200

his place
 on red cond

his body in whed
 large wheels machinery

puddles sticking jelly partly risen
 its place: but water also will remain in it
 the glass is at w/ gravity which if the wheel were stationary
 both glass and water to fall, is completely nullified by the centrifugal force

98) square of the velocity
 the gun side to part as it now does, its centrifugal force would be 4 times
 this explains why a cord with which a stone is whirled is more apt to break under a rapid motion than a slower one. every time is doubled; strain on the cord is increased fourfold

9) Centrifugal force acts not only on bodies revolving on their own axes but also on fixed bodies revolving on their own axes
 a large wheel machinery centrifugal force at the circumference
 this force overcome centrifugal force

velocity them

[Faded handwritten notes on the left page, including some legible words like "centrifugal" and "rotation"]

break ^{ブレイク} ^{イテイク} it's ^{イテイク} ^{適当} not-only ^{ノット} ^{オンリー}

central ^{セントラル} | circular ^{サーキュラー} | elliptical ^{エリプティカル} | linear ^{リニア} | towards ^{トワーズ}

frictionless ^{フリクションレス} advantage ^{アドバンテージ} | astorish ^{アストリッシュ} | indians ^{インディアンズ} | expect ^{エクスペクト}
 meat, bread ^{ミート, ブレッド} in ^{イン} fully ^{フル} | wine ^{ワイン} | glass ^{グラス} | pretty ^{プリティ} | inside ^{インサイド}

rotational ^{ロタショナル} rapidly ^{ラピッド} | axle ^{アクセル} | proper ^{プロパー} amount ^{アマウント}

communicated ^{コミュニケーション} its ^{イット} fully ^{フル} | remain ^{レマイン} it ^{イット} spilled ^{スピル}

stationary ^{ステーションナリー} completely ^{コンプリート} nullified ^{ナリフアード} centrifugal ^{セントリフュガル}

low ^{ロー} concentric ^{セントリック} | circular ^{サーキュラー} | revolving ^{レボリューション} according ^{アコーディング}

it does ^{イット} its ^{イット} as ^{アズ} fast ^{ファスト} as ^{アズ} great ^{グレート} | explains ^{エクスプレインズ} why ^{ワイ}

cold ^{コールド} | thick ^{シック} | whirled ^{ウィール} | sling ^{スリッ} | more ^{モア} | not ^{ノット} | break ^{ブレイク} | rapid ^{ラピッド}

slow ^{スロウ} | doubled ^{ダブル} | its ^{イット} | strain ^{ストレン} | increased ^{インクリーズ} | principal ^{プリンシパル} (79)

revolving ^{レボリューション} | acts ^{アクト} | not ^{ノット} | curved ^{カーブ} | fixed ^{フィクス} | axes ^{アクシズ} | rapidly ^{ラピッド} | with ^{ウィズ}

stirring ^{スティル} | circumference ^{サーキュマフェレンス} | becomes ^{ビカムズ} | great ^{グレート} | (80) | tremor ^{トレモア}

seems ^{シムズ} | porter ^{ポーター} | unless ^{アンレス} | materials ^{マテリアルズ} | rotation ^{ロタション} | other ^{オザー}

great ^{グレート} | sling ^{スリッ} | apt ^{アプト} | what ^{ワット} | (81)

ツツツ

its their resolution in exactly

some of the parts lying

come they have made a shorter distance to go

Disruptions 2

thing complete stranger than at any other part

that they track

states it stronger

Multiple layers of handwritten notes on the left page, including a diagram of a dome-like structure.

plume

81 continental plate, acting

Handwritten notes on the right page, including a diagram of a rectangular structure with internal lines.

at the p 82

a sphere

in pottery

Multiple layers of handwritten notes on the right page, including a diagram of a rectangular structure with internal lines.

Oblate 扁球 扁球 扁球

its their revolution in exactly
the same way as the Earth's

come they have a shorter distance to go
than at any other part
that they travel
because it is stronger than it is

force on it is greatest at the equator and diminishes from that point till at the poles

it wholly disappears at the poles
The force is zero at the poles

30 This difference of force is made to rotate rapidly
the tendency of particles

at the equator to fly off
the sphere bulges out

A similar result is produced at right angles to each other
on the surface at the ends but loose at the poles

being communicated to the hoops
they move out from the center
when allowed to come to rest they will return to their original position at the poles

plane

81 centrifugal force acting
The force is zero at the poles

82 The force is zero at the poles

83 The force is zero at the poles

84 The force is zero at the poles

85 The force is zero at the poles

86 The force is zero at the poles

7777

come they fragments ponderous firestones but it

distinctions too great impacted them whole rocky

complete their revolution strictly lying

that they travel faster east centrifugal that in

causes it stronger than at any other part

near revolving sphere greatest that till at

poles it wholly disappears 80 Difference intensity

different clay revolves rapidly potter's tendency

particles on and near equator to fly off that ball

jet out becoming proportionately flattened

thin flexible metal hoops fixed right angle past

need loose at 10 to admit freely up down

rapid rotary communicated hoops become oval

the three revolutions with the
... (faded handwritten notes)

From the point
... (faded handwritten notes)

87

oblate
... (faded handwritten notes)

地球の自転は赤道に最も速く、極に最も遅く、赤道と極との距離は赤道より遠くにあるほど、自転の速度は遅くなる。これは、地球の自転が剛体の回転であるからである。赤道に近いほど、自転の速度は速く、赤道から遠くにあるほど、自転の速度は遅くなる。これは、地球の自転が剛体の回転であるからである。

come they have a greater distance to go
 distance is longer than at any other part
 there they travel slower
 it is longer

地球の自転は赤道に最も速く、極に最も遅く、赤道と極との距離は赤道より遠くにあるほど、自転の速度は遅くなる。これは、地球の自転が剛体の回転であるからである。赤道に近いほど、自転の速度は速く、赤道から遠くにあるほど、自転の速度は遅くなる。これは、地球の自転が剛体の回転であるからである。

Plume

21) centrifugal force, acting, is supposed to have been kept from
 center of their own planet is compressed, forming at one time to
 poles becoming solid, it is pulled out at the equator and
 same expelled at the poles. became an oblate spheroid
 distance from pole to pole

22) produces whether which it is that alone
 it carries its rapidity as it is at rest
 from east-hand of North whether
 up orange catches it his
 at point square upright on such which slides
 it like it descends stop it slide this
 instant 25) resultant boat which attempts to
 north action river while tide carries it up
 oblate

これは、地球の自転が剛体の回転であるからである。赤道に近いほど、自転の速度は速く、赤道から遠くにあるほど、自転の速度は遅くなる。これは、地球の自転が剛体の回転であるからである。

its thin rotation in exactly
... (with Japanese annotations)

come
... (with Japanese annotations)

... (with Japanese annotations)

plane

lying out increased allowed they position
centrifugally ... (with Japanese annotations)

which composed ... (with Japanese annotations)

rotary becoming it ... (with Japanese annotations)

poles oblate spheroid from pole to pole equatorial
... (with Japanese annotations)

82 produces whether which it is that alone
... (with Japanese annotations)

83 single 84 result
... (with Japanese annotations)

85 resultant boat which attempts ... (with Japanese annotations)

Subject (花)

花

Handwritten notes on the left page, including:

- ①
- ②
- ③
- ④
- ⑤
- ⑥
- ⑦
- ⑧
- ⑨
- ⑩
- ⑪
- ⑫
- ⑬
- ⑭
- ⑮
- ⑯
- ⑰
- ⑱
- ⑲
- ⑳
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- ㊿

Handwritten notes on the right page, including:

- ①
- ②
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- ㊾
- ㊿

Vertical text on the right margin, including:

- 境
- 火
- 殺
- 請
- 銃
- 子
- 級
- 力

in addition to outman, effort and the like, this should also be noted, this also

resultant motion produced by 20 parallelogram by its body action by two forces

between the lines which they separately in fig 33. when between

to get direction of boat and point it would reach: find other side of the

body will make in diagonal of a square that is directly across

87 two forces which they would carry it of one other accordingly

time he would reach B: time would have increased his boat one-half of that distance

to D 88 which one body exerts

on other subjected to its operation

83 reaction which counter pressure body acted upon exists on the

body acting

reaction is always equal to action

opposite to it in direction

[Faint handwritten notes on the adjacent page, including diagrams and text.]

subjected 花 遊
分 入

括弧 花 遊
到 岸

it acted alone } boatman he crossed with the line
 started which he it addition efforts like slow
 this produced its exhibit resultant joint 26 pu,
 callogram examined diagonal which they appear,
 they propel it starting row his tide carry it both
 not it reach diagonal course its
 extremity point it 27 square directly they it
 constructed accordingly be taken tide be that dir,
 time completing drawing that joint 28 exists op,
 section 43 reaction counter force exists equal,
 opposite to it 29 strike off against table
 tends contrary breaking its shell push diagonal force
 and feel resistance it opens downward blows
 upon it

[Faint handwritten notes and diagrams on the right page, including a diagram of a square with internal lines and various annotations.]

[Faded handwritten notes on the left page, including some diagrams and illegible text.]

抱枕スル 此方ニ 持ッ
carly support supports | Corlet pulls his car
against | Decides opposite | fires gun exploding powder
carries 'kick' causes it recoil shoulder | connected
rope pulls cushion which he is in, velocity 殺ス
light hard pavement, lights on feather bed
Has little no injury 傷 逐次 攻撃
landing likely strike violently against back 同 Collision
Discovered rush cushion interposing coil rope 彈丸銃 bullet子

Who to raise) order force pulling
found that all up there impulsive
Why counterbalanced by equally strong downward impulse
and that his utmost efforts could not reverse the law of nature
which

cushion

which

[Faded handwritten notes in Latin script, possibly a list or journal entries.]

船ノトモテ
スエデン
用ノフ

ルノフ
ルノフ
ルノフ

ルノフ

ルノフ
ルノフ

ルノフ
ルノフ

ルノフ

ルノフ

ルノフ

ルノフ

出全
out with

93

letter

ルノフ
ルノフ

94

ルノフ

ルノフ

ルノフ

ルノフ

ルノフ

ルノフ

ルノフ

ルノフ

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ルノフ

[Faded handwritten notes on the top right page.]

[Faded handwritten notes on the middle right page.]

[Faded handwritten notes on the lower middle right page.]

[Faded handwritten notes on the lower right page.]

[Faded handwritten notes on the bottom right page.]

[Faded handwritten notes at the bottom of the right page.]

92 read of another man no less ingenious who rigged huge bellows his
 that he might always be able to make a fair wind
 he found that all his blowing he could not make the boat an inch

for motion of air on bellows
 kept her back as much as it action on the sail

92 they suspended balls in a line in a room
 tended to make her posture

fig 36 or 37 A is a sphere B is a sphere
 encountering B it imparts to it its motion both B made on those only half

for latter A loses just as much motion by the former gains
 will along to same height

95 while B will along to same height
 being A to rest

met with

93 letter
 most difficult

94
 ball
 ball

95
 ball

96
 ball

97
 ball

98
 ball

達不 動得 出 達

counterbalanced equally strong impulse that set,
most efforts return opposite read in,
zigzagged huge bellows stern without that
he able with mind he his blotting boat ink kept
reaction will-elastic
bited differently suspended balls they is by red,
raised allowed it met it about ends,

in the two balls be of story of way substance | A will impart whole of its motion to B
and remain stationary after striking: while B will strike A to same height
that A would have rebounded if unobstructed
being A to rest | which sets B in motion
met with

Handwritten notes and diagrams on the right page, including a diagram of a ball on a surface and various mathematical or physical notations.

達 勁 得 出 途 7

counterbalanced equally strong impulse that set,
most opposite **45** opposite 對 read in,

zigzagged huge bell-shaped stern without that
he able suit him he his blocking boat in kept

reaction well-clustered
bited differently suspended balls they ivory red,

raised uttered it met it about ends
entering it impart it portion gone alone

highly impart whole remain it
striking **45** taking that reach

here again evidently rest
suspended strings front graduated

and they make | Or a whole out uttered | it
met with

Handwritten notes in English and Chinese characters at the top of the right page.

Handwritten notes in English and Chinese characters in the middle of the right page.

Handwritten notes in English and Chinese characters in the lower middle of the right page.

Handwritten notes in English and Chinese characters in the lower part of the right page.

Handwritten notes in English and Chinese characters in the bottom part of the right page.

Handwritten notes in English and Chinese characters at the very bottom of the right page.

[Faded handwritten notes on the left page, including some diagrams and mathematical symbols.]

93) 10 m to: Which distance they move can be observed be drawn out: it is $\frac{1}{2}gt^2$
 letter to rest A
 when A started
 B it plus off to the same height from
 $I = \frac{1}{2}gt^2$

94) reflected motion: is motion of body turned from course by reaction of another body against which it strikes
 which it is turned - $\frac{1}{2}gt^2$
 if a body possessing little or no elasticity be struck by another body it will rebound with less velocity than it had at all.
 it is particularly true of a ball rebounding from a hard surface.

angle DAB, made by the perpendicular with the surface of the ball
 it is particularly true of a ball rebounding from a hard surface.

98) gravitation - attraction is universal | it is compared to things on land
 about earth's surface | extends to heavenly bodies
 in their respective spheres
 it does the falling stone
 heavenly bodies
 certain

out with

[Faded handwritten notes on the left page, including some diagrams and illegible text.]

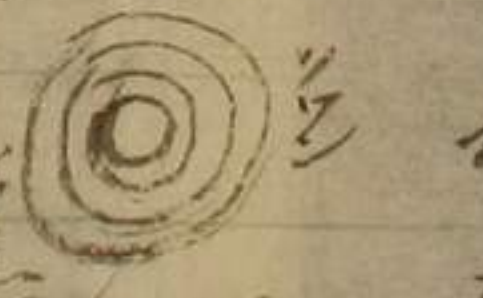
[Faded handwritten notes on the bottom left page, including some diagrams and illegible text.]

at all

配合入ル 相抗スル 係、全、請取ル 17
impact its reaction kept finally releases it, it flies
step height started (94) reflected turned its
course another against which it strikes rebounding
ing which it approaches possessing little no elasticity
it rebound but if at all reflected striking instances
that bound then that it stopped station (95) proper

(97) what so the all that it does not fly up and this mutually att.
not each other
the tendency of bodies when unsupported to approach earth's surface

(98) gravitation - attraction is universal | it compares to things on land
about earth's surface, extends over | was in fact great weight by the
in their respective spheres heavenly bodies certain
at distances it does the falling stone



出金
not with

[Faded handwritten notes on the left page, including diagrams and text.]

[Diagram showing a curved path or trajectory.]

[Faded handwritten notes on the left page, including diagrams and text.]

at all

配合入ル 拍抗スル 保、全、リ 請取ル 17
 impact its reaction kept finally releases it, it pl,
 stop might started (94) reflected turned its
 歩行道 二回ヲ 案リ、チ、中 11カニル
 course another against which it strikes rebound,
 ing which it supports possessing little no elasticity
 11カニル 投返 折込、チ 有碍
 it rebound but if at all reflected striking instances
 11カニル 糸 毛 三 投返 有 17
 that bound yarn that it stung cotton (95) paper,
 鉛通ニ 11カニル 方ニ 中ニ突 透来ル 透
 circularly rebounds towards strike it it return
 鉛通ニ 鉛=17 鉛直線 鉛 鉛通
 however it glance off perpendicular angle near
 it it further proportion 46 (96) course contact
 交互線 投返折返 投返 折込、チ
 incidence reflection reflected mechanics (con,
 透 地、浮世、 折方= 81
 times (97) terrestrial let so that it side way
 折方 一、二、 七、八、 9、 10、 11、
 things under the property mutually attract
 大ニ 21、22、 折、折、 折、
 earth superior earth other near it tendency
 折、折、 折、折、 折、折、
 gravity 重量
 カチ

similar 均手 subject 趣取
in 物 意

unsupported approach terrestrial simply 98 unist...
it confined things about extend throughout
millions feet apart 47 attraction existing
certainly various the 5 = 引奇ル
existing gravitation world was discovered unist...
Galileo investigated terrestrial (A.D.) he
imagine that existed beyond neighborhood Kepler
advanced step nearer truth spoke he conceived
of planetary this discovery important mode
in science he achieved that revealed mighty
genius sitting his orchard observed circumstances
and unist... train thought he knew confined
immediate it extended acquainted it crack out

aspect 引

point 向 部メテ
particular 別 此

effect actually cause for resolvable test speculations
undertook various tedious calculations proved that
unilateral that it determines orbits velocities in
qualitative observed causes produces tides 99
established respecting: ① instantaneously where
created felt it off ② lesser interposition
does not offer obstacle to it ③ entirely in line
pendant that contain amount 48 700 lead
suspended kept from string point towards this
globe it that opposite points plummet plane
line (suspended) this relative positions ten
being particular in such directions according
it near that it point it peculiar attraction

similar 均干 subject 趣取
in 物 意

unsupported approach terrestrial simply 98
it confined things about extend throughout
millions feet apart in fact respective phases
certainly assumes that it pulling stone 97
existing gravitation world was discovered
Galileo investigated terrestrial (A.D.) he
imagined that existed beyond neighborhood Kepler
advanced step nearer truth spoke he conceived
of planetary this discovery important
in science he achieved that revealed mighty
genius sitting his orchard observed circumstances
and awakened train thought he knew confined
immediate it extended acquainted it struck out

aspect 趣取
人カ 行ル

point 向
部メナス 凡 別
particular 凡

effect actually cause fit resolvable test speculations
undertook various tedious calculations proved that
orbits velocities in
produces tides 99
established respecting: ① instantaneously
created felt it off ② lesser interposition
does not offer obstacle to it ③ entirely independent
amount that contain amount 48 700 lead
suspended kept from striking point towards this
globe that opposite points plummet plane
line (suspended) this relative positions ten
being particular in such directions according
it near that it point it peculiar attitude

住居スル 行ル 下カス 園内 成果
 resides that falling leads sphere this result part
 一部分 史故ニ 来ル 海測器 掛テ
 studies consequently it seeks no plummet suspension
 ニツニ 出逢 僅ル
 need exactly which they hang near at slight interval
 見へ難キ 十分ル 限 境 船 少 里
 perceptible absolute transit ship per miles
 立ツ 有様 立 中心
 standing position carried straight its center on
 向合ル 代リニ ヲカスニ ヲカス 下ヲ
 opposite he instead I pointed up point down
 49 simply down up way what unexpecting part
 誤リカク 一キ 明ズ 向合ル カラニ 上
 led account got to opposite there regarding
 ヲリ 高キ 下ノ 保ツ 落ル
 per us on they that under keeps precipitated
 全リ 保 動 引 102 保 取用 保
 alike kept gravity for (widest range included)
 引カ 引カスル ヲ 高ニ 従テ
 being gravitation) depends amount according
 一ス 4ニスル 保
 creates 2 distances cause 103 contained it
 ニツ 5ニスル 保
 it will take its present it if it large

precipitated 保
 保
 保

保ツ ヲカス 保ツ
 it is so rare as to contain less though it
 保 保
 iron other cork latter it remarked that it
 保 保 保
 perceptibly impacted when atmosphere it
 保 保 保
 104 made near it that it put it is on account
 保 保 保 保
 enormous that it felt remote solar system 50
 保 保 保 保
 carried strongly immune mass that he literally
 保 保 保 保
 crushed 104 while as yet it it matter situation
 保 保 保 保
 led respectively nearer distant as strongly as
 保 保 保 保
 105 absorbed we consequently perceived
 保 保 保 保
 contains it stoking inside plummet suspended
 保 保 保 保
 base pointing directly plumb-line position interval
 保 保 保 保
 line slightly such 106 slight spotted
 保 保 保 保
 prevented impulse it presses on that shock
 保

支也 7日
 supports it strongly it more or less which it
 下方工 押シ 平均ニスル
 this downward pressure measure proportioned
 保シ 容 引重キ 素質 均合
 contained | heard it matter noting measure,
 2. which change take it they 107 below but,
 減スル 均合
 2. as it increases it. 57 lighter proportion they
 均合 均合
 become as much as reason clear through
 均合 均合
 work it it it elevations loses to but little
 均合 均合
 lighter raised moon reduced less 108 but,
 均合 均合
 it had less instances high moment descended
 F= 均合 均合
 beneath level behind exactly 52 repeated
 F= 均合 均合
 beneath below | whole that work all it its dimi,
 均合 均合
 with any thing object as below it it equally
 均合 均合
 109 carried lighter approached: below
 均合 均合

尊 一ノホル 減スル 二ス
 110 added ascending diminishes increases but,
 降ル 均合 均合
 ending | fig 55 operation 53 711 dipper poles
 均合 均合 均合
 equator 112 this coming causes 1 equatorial pole
 均合 均合 均合
 further but through 2 centrifugal counter balances
 均合 均合
 it that embodied it entirely despite velocity in,
 均合 均合
 caused further 113 does it rise then mounts
 均合 均合
 clouds | this it contains less bulk than many mete,
 均合 均合
 or briefly through gravity causes winds gust
 均合 均合
 unrolled 54 bottom | change down below but,
 均合 均合
 the velocity further can't dropped reach,
 均合 均合
 Aristotle his successors thinking that proportioned
 均合 均合
 that required half the time | Galileo set,
 均合 均合
 set this error | he held that independent their
 均合 均合
 不均合

that dropped instant startling proposition cond,
 earned learned convinced truth his position shall,
 engaged his opponents trial learning tower pine
 Italy chosen as some experiment multitudes pl,
 check witness it produced exactly examined
 present possibility description signal they dropped
 unless anxiety crowd awaited result doubting that
 it compound youth bold stated appear object establish,
 their opinion contains Aristotle master unmake,
 ant right balls reached instant unshakable credit
 further again and again repeated experiment triumph
 it awakened jealousy repeated crystals
 Galileo his professor mathematics university pine

established that gravity causes descend rapidly
 repeated that apparent curved feather cent
 proportioned extent prevents extended hastily
 sketched button that it ascending slow its
 descent floating for a time gravity that exhibi,
 that feather its plate slowly descended
 roll it compact mass it descend rapidly
 high instrument described helicopter then
 apparatus provided purpose deep simultaneously
 reach bottom at precisely instant vertical reaching
 parachute it contains that enables descend
 rapidly parachute which spreads open umbrella prop,
 under beneath position, flat-shaped air hanging
 parachute 气球 降落伞 伞 伞 伞 伞

下三 船行以 恐スニ 送ル出ス 離ス
 beneath | aerial voyage possibly detaches
 for boom broken which offers extended
 width that induces 50 longer | induce capacity
 common-sense last account = it attached (118) part
 being bodies solely velocity | it evidently accelerates
 too which causes continuous descent forcing it
 it increases so on it reaches exact space
 desired descent formerly exceedingly difficult
 capacity which condenses for experimenting
 about 1/2 then | when perpendicular height induces
 water purpose such that base difficulties removed
 ingenious apparatus its inventor Atwood's machine
 (119) pillar & surmounted horizontal plate

base stand extends perpendicular graduated scale
 part inches inches | supports vertical wheel
 it is possible friction with on part
 I rest weights connected cord pendulum which
 vibrates once | dial-plate index (pure clock)
 exactly counterbalances it attach one sixty-third
 combined | this slight addition induces descent
 it ascends neither counterbalanced 57
 had shock sets added as long descending it drops
 as freely experimenters thus opportunity observing its
 determining relative success beats pendulum
 but in if freely motion greatly diminished slight
 that it need not calculation (120) that calling tea

17 2d 4th series of m... it...
 Descends according results obtained it
 48 termination addition 121 summed...
 not multiply corresponds... tenth series...
 series of tenth 305/12 = 3027/12 教 2 series...
 tion descent that series when which correspond...
 tenth per 2 3 grade remaining 122 the...
 down... apply acted gravity alone calculated...
 ion cast height propel 59 instead...
 height obtained obtain distance...
 consequence originally imparted...
 alone... 123 no...
 probably shaped... experiments it...

cathedral show that... according principles
 states... difference amounts nearly...
 ally 124 long for it... tremendous speed...
 proportioned... considerable...
 Disintegrated... stones... cattle...
 notes...
 that fields...
 descent to... 80 at last brought...
 new...
 exist...
 spheres...
 entered...
 ninth... 126 according

志ル 射ル 真直ニ 縦ニ 降ル 何程何...スル 下ガル
 stated shot vertically descend whatever struck
 元来 放ス 何程何...スル 下ガル
 that it had originally discharged ^{何程何...スル} parts rising
 降ル 又此 否 降ル 再ニ 振ニ 殆ト
 as high as other being descent it again lower nearly
 頂ニ 登ル 殆ト 下ル 前ニ 過テ 残ル 由ル 均合
 ball amount leading little other remaining prop
 元来 投出カレ 物ヲ 戻ル 中スル 物ヲ 戻ル
 action originally projected returning equate return
 物ヲ 射リ 下ガル 物ヲ 射リ 下ガル 直ニ 放ス
 ing strikes effect immediately discharged
 得ル 送ル 出ル
 come out

60 (127) 投出カレ物 矢 矢 弾丸
 projectile arrow discharged bow bullet
 ② 矢ニ 直ニ 矢ニ 矢ニ
 constantly impels it towards ③ 矢ニ 矢ニ
 128 路 標ニ 矢ニ 矢ニ 矢ニ 矢ニ
 path being its possibly altered diminishes
 矢ニ 矢ニ 矢ニ 矢ニ 矢ニ 矢ニ
 makes it resembling curve parabola
 投出カレ 矢ニ 矢ニ 矢ニ 矢ニ 矢ニ 矢ニ
 projectile would have definite obliquely propelling
 矢ニ 矢ニ 矢ニ 矢ニ 矢ニ 矢ニ
 ends it it it not that becomes sufficiently diminishes
 矢ニ 矢ニ 矢ニ 矢ニ 矢ニ 矢ニ
 it vertical 129 降ル 矢ニ 矢ニ
 charged horizontally describe curve which makes
 62 矢ニ 矢ニ 矢ニ 矢ニ 矢ニ 矢ニ
 according originally impelled towards
 矢ニ 矢ニ 矢ニ 矢ニ 矢ニ 矢ニ
 whatever such precisely that it which it discharge
 矢ニ 矢ニ 矢ニ 矢ニ 矢ニ 矢ニ
 eyes planted on tower it such that it see it
 矢ニ 矢ニ 矢ニ 矢ニ 矢ニ 矢ニ
 stopped such fired projectile alone it should
 矢ニ 矢ニ 矢ニ 矢ニ 矢ニ 矢ニ
 in one necessarily dotted making successive fired

touch precisely instant that strike (130) slight sh.
 why becomes powerful agent in crises / piece
 before probably alone would stop it / various opposed
 it goes but (131) projectile remains longer
 (132) random range projectile causes which it begins
 perpendicularity retains which it started cause
 on straight course / deviates perpendicular because
 until it (133) somewhat angle it again dem.
 inishes / it leaves in hit vessel / it
 (133) gunnery relating projectiles basis science
 gunnery / artilleryman / elevate allowance (134)
 military discharged and gunpowder / rolled up
 application spark instantaneously conducted

expands its previous bulk / this sudden expansion
 copied within finds that ball missile impact
 who invented gunpowder ascertained / it contains ch.
 certain Chinese who it for labelling / a blasting
 rock also remains ancient pieces of ordnance in India
 the military purposes / eastern nations appear to have
 introduced early date / Roger Bacon celebrated English monk
 wrote A.D. / alludes it to as still composition
 later birth of which the primitive monk (134) invented
 gated its properties its inventor / burden that had
 being what (135) striking increases / ordnance attack
 ing port charged / possible / naval engagements sea
 sited plant energy / hull for thus imparting
 A.D. in the year of / piece of ordnance / piece

動突 損害 長筒工切=裂 林木 十分
 it shock damage splintering timber sufficient
 740 十分=全 幹 時計 測
 27 completely ballistic pendulum measure
 鐘 鉄 任 放 口
 ing musket suspend piece fired measure
 鐘 鉄 任 放 口
 coil reaction proportional discharged instrument
 時計 十字 大 組
 ballistic pendulum cross-piece stout framework
 重 木 切 掛 止 射 木 切 追 平均
 heavy block suspended fired block strike it prop
 測 測 測 測 測 測 測 測
 sectioned measured ribbon attached lower pend
 孔 筒 筒 筒 筒 筒 筒 筒
 gun ripple carried it distant determined
 時計 十分 十分 十分 十分 十分 十分 十分
 137 it ballistic pendulum that little over 65
 測 測 測 測 測 測 測 測
 carry it charged amount powder uniform
 積 荷 荷 荷 荷 荷 荷 荷 荷
 as charge useless dangerous burst barrel
 記 子 子 子 子 子 子 子 子
 impacted random slightly increased distances
 測 測 測 測 測 測 測 測
 regarded positive disadvantage 138 pendulum
 測 測 測 測 測 測 測 測
 注意 注意

振 740 跡 前 740 740 果
 suspended thing 20 to raised during rise
 向 向 向 向 向 向 向 向
 opposite it force operated it no it power on
 振 振 振 振 振 振 振 振
 friction suspension constantly tending check its
 振 振 振 振 振 振 振 振
 equalize that it thing finally 139 to stop
 振 振 振 振 振 振 振 振
 to see what it 140 vibration 66 pendulum
 振 振 振 振 振 振 振 振
 performed nearly whether was raised it in long
 振 振 振 振 振 振 振 振
 slower principle it slowly it pushed 141 proper
 振 振 振 振 振 振 振 振
 tioned vibrates doubled it tripled it quadrupled
 700 振 振 振 振 振 振 振 振
 as long as that other considerably 2000 vibrating 142
 振 振 振 振 振 振 振 振
 wanted slightly diger according vibrating vibrating
 水準 水準 水準 水準 水準 水準 水準 水準
 one level it further yada it number flattened
 50 振 振 振 振 振 振 振 振
 4000 means measuring heights 67 conical that pos
 振 振 振 振 振 振 振 振
 low latitude 143 spittoon for exactly

application pendulum clock-work gait,
 to whom science owes thank turning practical
 getting that dunkelheit suspended ceiling church
 pism vibrated exactly whether carried be that
 similar instrument employed measuring inter-
 as astronomical adapt it it counterbalancing
 constant loss caused friction incident Dutch astron-
 omer huggens applied pendulum invention mod-
 in astronomy owes precision consequently prof-
 it vibrating order inconvenient it custom
 that vibrates according principles laid down as long
 little less elevation temperature vibrates
 regulated uniform rapidly

(state after lesson effect) rapidly slow
 pendulum present expected compensation
 some nine bars alternately steel bars arranged that
 steel bars fastened expanded while fastened it be-
 come opposite expansion metal counterbalancing
 that remains heavy black close regulated bar
 showing shortening occurring low covered raised it
 slow practice (mistake) icy containing run
 high high beneath high beneath horse he thin
 low low beneath trunk height turkish porter carry
 retained strength elevated below (follow)
 allowance) much steeper descent (altitude) (altitude)
 10 hail-stone 11 12 13 drop pebble empty shell heat etc

this strike

三ツニ 707 東京 1931年 降ル 瞬間 落入ル
 with deep shell public descent moment striking 15
 銃丸 落 凡船 ツルツ 15 降ル
 musket-ball dropped balloon continues strikes 15 降ル
 降ル 16 17 18 19 20 21 22 23 24 25 26
 16 17 18 19 20 21 22 23 24 25 26
 charged 18 long projected continue ascend ascending
 射ル 19 20 21 22 23 24 25 26
 19 shot continues ascend 20 21 longer periculum 22
 state 22 cape slope vibrate respectively 23 etc.
 24 latitude port vibrating length 25 26 etc.
 noted that

山甲 標 標 標
 山甲 標 標 標

70 Chapter VI 128 that about balanced which
 20日 日 厚 平面 三ツニ 均等
 not uniform density plane exactly regarded com.
 中心=集ル 129 均等 均等 均等
 centered 129 均等 均等 均等
 130 131 132 133 134 135 136 137 138 139 140
 131 132 133 134 135 136 137 138 139 140
 141 142 143 144 145 146 147 148 149 150
 151 152 153 154 155 156 157 158 159 160
 161 162 163 164 165 166 167 168 169 170
 171 172 173 174 175 176 177 178 179 180
 181 182 183 184 185 186 187 188 189 190
 191 192 193 194 195 196 197 198 199 200

平方方形 角像 横ニナル 不規則ナル 概シ
 parallel-gram diagonals intersect irregular
 find it it study drop plumb-line suspension
 must lie where intersect suspend dropping cross
 156 connected rod unequal, nearer hub
 157 stability base lowest supported legs
 their connecting bottoms 158 falls within base
 stands when exactly extremity, overturned they
 light outside carrying load naturally breaks being his
 otherwise if heavy pull over 159 highest that
 which broadest hardest overturn furthest
 pyramid stable that which broadest 160
 load storms, thousand stability increased them
 broader | landsticker instants spread bottom the
 to pull back

顛倒 八千 曲ル 升方ニ 引コル 近床
 easily upset legs base outward approach floor
 three-legged stool case overturned 161 upright
 gravity magnitude local support it remains
 position touches slight push beyond fall the
 162 sloping outside cube maintains within
 lowest hardest overturn least
 liable apparent leaning far stay
 intrinsic upright position highest addition
 several stories it quips entire water
 spread couch heavy baggage piled danger
 upsetting rough work principle load partially
 they overturned base 163 lower stable put
 goods reasons hardest lowest turned account
 廻轉 觀察 翻譯

高ナ 傾テ居ルニ 登ル 持ツ 重キ物 傾ル 如
 height lean standing carrying weight may like
 露 見ル 則容易テ 持ツ 兩手 平均スル
 leaning not find carrier carry each hand balance
 78 知ル 平均スル 体勢
 report necessity impart learned balance position
 這 〇口 危難 唐ル 太 7=拍ツテ
 concept point danger it enlarges in order to it
 守護ス 平均 身ツ 業 カマシテ 適当ニ 気行
 how preserve balance practice sports likely
 眩暈 酔セル 矢ノ カ 守護ス 拍 (767)
 they intoxicated per loss posture persisting
 昏 自然ニ 投出ス 氷 皆ニ 棄
 slip naturally throw out water ruts skating
 此ス 企 目的 網渡スル人 任意ニ 為ス 行
 constantly purpose rope-lancers performing
 仕業 適ル 速キル 〇口 見ル 相当ニ 拍ツテ 守ル
 to shift rapidly point finding insignificant main
 保ツ 平均 繩 〇口 投出ス 女子ハ 体勢
 training balance rope slight throw desired point
 牧人 園 廻轉 行 行ル 平均
 ion (768) shepherds lands turns art balancing
 道 利益 説 獲ルル 羊 土地 蓋ハルニ 三片〇
 account land sheep region covered marsh winter
 アツテ 破 ツツ 土堤 四 高ナ
 hot sand summer mount on stilt about four high
 名山 木 三
 部 登ル 竹馬 脚 造

カツ合ニ 別
 竹ヲ居ル 別
 〇 牌ヲ 手ノ 正ニ
 liability practicing only use exceedingly
 達スル 竹馬ル 〇口 〇口 〇口 〇口
 expert stilt become walk on them when dance it
 〇口 〇口 〇口 〇口 〇口 〇口
 同断ヲ 取極メテ 平均
 hard for stranger (769) stable unstable equilibrium
 〇口 〇口 〇口 〇口 〇口 〇口
 tends get lowest possible point 〇口 〇口 〇口
 〇口 〇口 〇口 〇口 〇口 〇口
 strings released till reaches lowest pendulum
 海中 浮遊 真直ニ 懸 提
 plummet it vertically hammer matter it thrown up
 〇口 〇口 〇口 〇口 〇口 〇口
 descends part tends to low shuttlecock arrow
 〇口 〇口 〇口 〇口 〇口 〇口
 it reached times descends heaviest plummet (770)
 〇口 〇口 〇口 〇口 〇口 〇口
 testing that position stable equilibrium plating
 〇口 〇口 〇口 〇口 〇口 〇口
 apparently equal lowest possible force applied directly
 〇口 〇口 〇口 〇口 〇口 〇口
 it obeys rock to and go position slight
 〇口 〇口 〇口 〇口 〇口 〇口
 the overturn it hardly certainly (771) stability
 〇口 〇口 〇口 〇口 〇口 〇口
 where oval increased cutting bases' rocking tops
 〇口 〇口 〇口 〇口 〇口 〇口
 to rock no matter

磨大理石 切 石 銀 功 木 備
ing marble cutting stone marking wood supplies

手容向 象財飾 煮燒 料理 器具
polders furniture kitchen cooking utensils dine

食部 磁器 庖 因 編 袋 造 編 洗
ng-room china knifes pots knit with washes

漆 危 行 三 折 木 印 刀 工 器 小 業 術 造
dyes fields prints signs prints hardly work art me

直 氣 直 無 不 直 斜 之 且 又 引 引
is team directly indirectly mores over woodful

精 密 上 下 運 石 碑 大 小 層 級 知 識 顯 示 保 存
precision capability pyramids egypt captured kept

備 衡 二 造 算 用 力 強 干
work twenty station computed that perfect it

蒸 氣 機 関
steam-engine egyptians (181) whatever opposes (84)

(182) character it might light well paid
セ ン ン 言 語 修 止 揚 高 井 泉 手 桶

onward train cars turned particles compressed
上 列 車 車 車 分 子 押 付 元

packing cotton bales cohesion atomism splitting
包 心 依 打 勝 裂

copy material which appears that instead repetition
大 事 目 的 見 代 目 的 因

備 衡 二 造 算 用 力 強 干
in work whatever opposes (183) unit efficiency
目 對 一 個 成 立

eyes 對 之 處
con 初 入

精察 = 仔細 仔細 仔細 仔細 仔細
 of such as exactly to fit lower parts of upper
 wheels upper attached plates
 ring carrying before them which opportunity
 escaping it rather opening 163 it discharges
 as long as (385) hydraulic chamber invented it
 is a moderate impulse which compressed butting
 quite gained momentum stopping steam engine
 causing momentum of 174. reservoir adapted in
 lines that work conveyed into air-chamber
 upright connected passage connecting compressed
 valve opening at extremity another
 we supposing suppose filled with water its volume
 escape requires momentum raise valve close
 opening | hunger bursting shock which force
 handle 取手

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