

inteGIRLS Puzzle Hunt Solutions

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EASY — 100 points

Compound Interest Solution

The first step of the puzzle is to solve the crossword:



Next, solvers should notice that the clues are arranged in an unusual order with blanks between them. Replacing the clues with their answers creates the following four expressions:

ABS + ___ + DING

BUR + ___ + SOME

___ + IS + FACTION

OBJECT + ___ + ABLE

The title of the puzzle clues solvers to use compound words. Normally, compound words are created from two smaller ones (for example, butter + fly = butterfly), but by filling in the blanks, solvers can create words from three smaller ones:

ABS + CON + DING = ABSCONDING

BUR + DEN + SOME = BURDENSOME

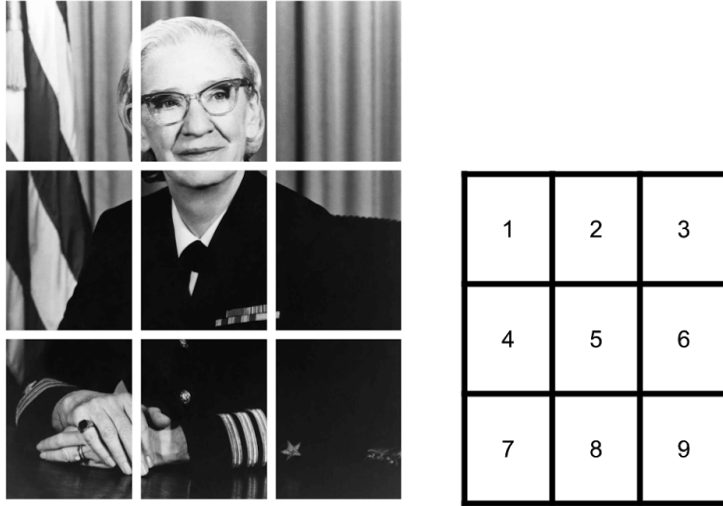
SAT + IS + FACTION = SATISFACTION

OBJECT + ION + ABLE = OBJECTIONABLE

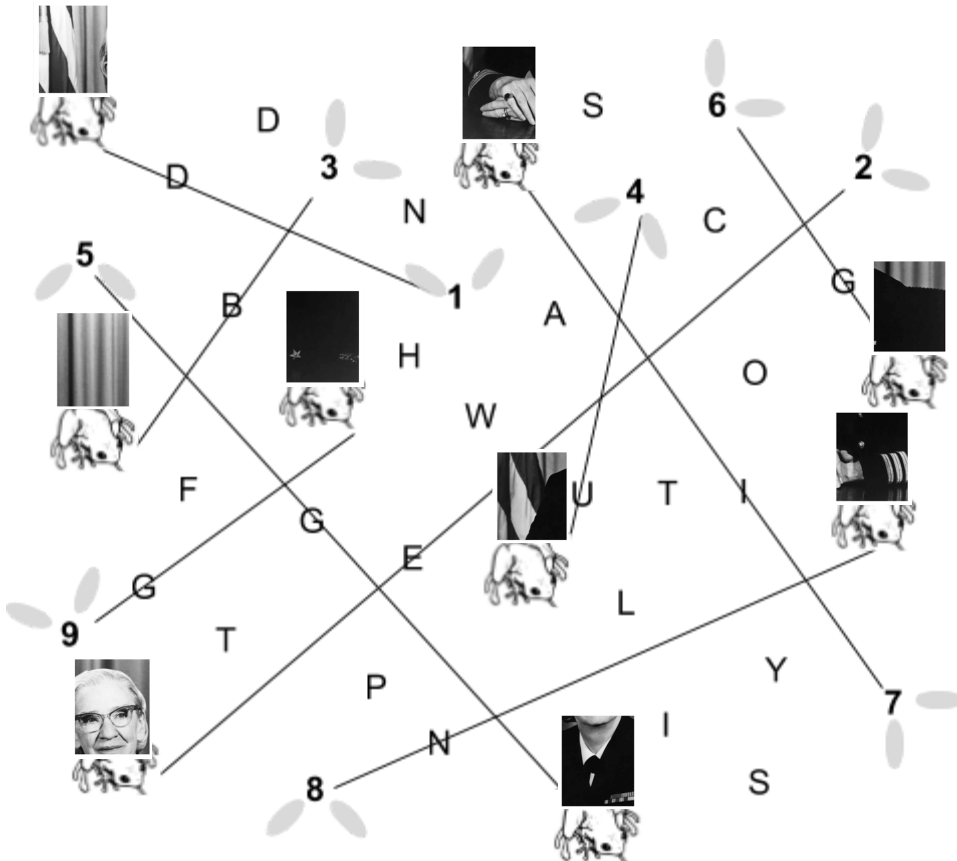
The four words that go in the blanks create a new compound word: CON + DEN + SAT + ION = **CONDENSATION**. This is an answer to the question at the bottom, so it is the answer to the puzzle.

Frogmented Solution

- Each rectangular image in the puzzle is a part of the same picture of computer scientist Grace Hopper! Each section of the puzzle corresponds to a section of the grid.



- The next step is to draw lines from the ends of the frogs' tongues with the sections of the picture to the numbers for the corresponding sections of the grid in the frog and fly image.



3. Each line goes through exactly one of the letters in the grid, and if you order the letters by the number that they are on the line of you end up with:

- 1 - D
- 2 - E
- 3 - B
- 4 - U
- 5 - G
- 6 - G
- 7 - I
- 8 - N
- 9 - G

The answer to this puzzle is **DEBUGGING**, a hobby of many frogs and a term coined by Grace Hopper referring to the process of fixing computer code!

Galaxy Positioning System Solution

Follow the directions, starting out on A, and covering every square that is passed over to find the squares indicated by the green markers in the diagram below.

Find the five different planet names in the square of letters (word search). The green path intersects the planet names at the blue spots, and skips the red spots.

R	U	N	L	G	F	K	O	H	S
D	N	M	E	T	J	U	P	I	A
Q	L	F	E	P	O	Y	L	A	T
S	P	A	C	R	T	E	U	B	U
U	O	H	N	D	C	U	T	M	R
N	I	O	Y	O	I	U	N	Z	N
E	R	S	M	S	T	S	R	E	I
V	H	T	R	A	E	N	O	I	R
L	S	D	O	O	G	N	C	K	T
A	R	E	T	I	P	M	A	R	S

When anagrammed, the blue squares spell out 'NASA', and the red squares spell out 'MOON MISSION'. When combined, they spell 'NASA MOON MISSION'.

Based on the fact that the arrival time is 11 PM, the solver can determine the answer is APOLLO after the famous moon mission Apollo 11.

FERRET - Draco Malfoy, after Moody's done with him
ROMCOM - Like *Crazy Rich Asians*
COMBAT - Fight
MBA - What They Give You at Harvard Business School
RANSOM - A type of note with many different fonts
OMEN - Halley's Comet, to the Normans
NAPKIN - Adult bib
KINSHIP - Familial tie
HIPPOS - River horses, minus the river
SONIC - He who has gotta go fast
ICON - Element of a home screen
CONIC - A set of points whose coordinates satisfy a quadratic equation
NICHOLAS - Santa Claus, sans the Saint

HOLA - "How ya doin, señor!"
ASKOUT - Request on a date
OUTRAN - Beat in a 5K, perhaps
ANSWER - "Forty-two" for "six times seven"
SWERVE - Turn abruptly
VERSE - It can be blank or free
SECRET - Two can keep one
ROBE - Something black, if you're RBG
BEGIN - You could do it with this clue
INVERT - Flip on its head
VERTEX - Pointy point
EXPOS - Dry erase markers
ONLY - Two, among even primes
LYRE - An instrument that isn't telling the truth?
REFER - Point towards

FERRETROMCOMBATRANSOMENAPKINSHIP**POSON**ICONICHOLASKOUTRANSWERVERSE
CRETROBEGINVERT**EXPOS**ONLYRE

When the red, green, and blue regions are combined, you get the answer **RETROTRANSPOSON**, which is a type of transposable element or jumping gene.

Locations United Solution

You would first find the nations that match up with the country shape:

Dominican Republic, Portugal, Kenya, Singapore, United States

Then, testing out various rotations of the carpet:

1, 5, 3, 9, 7

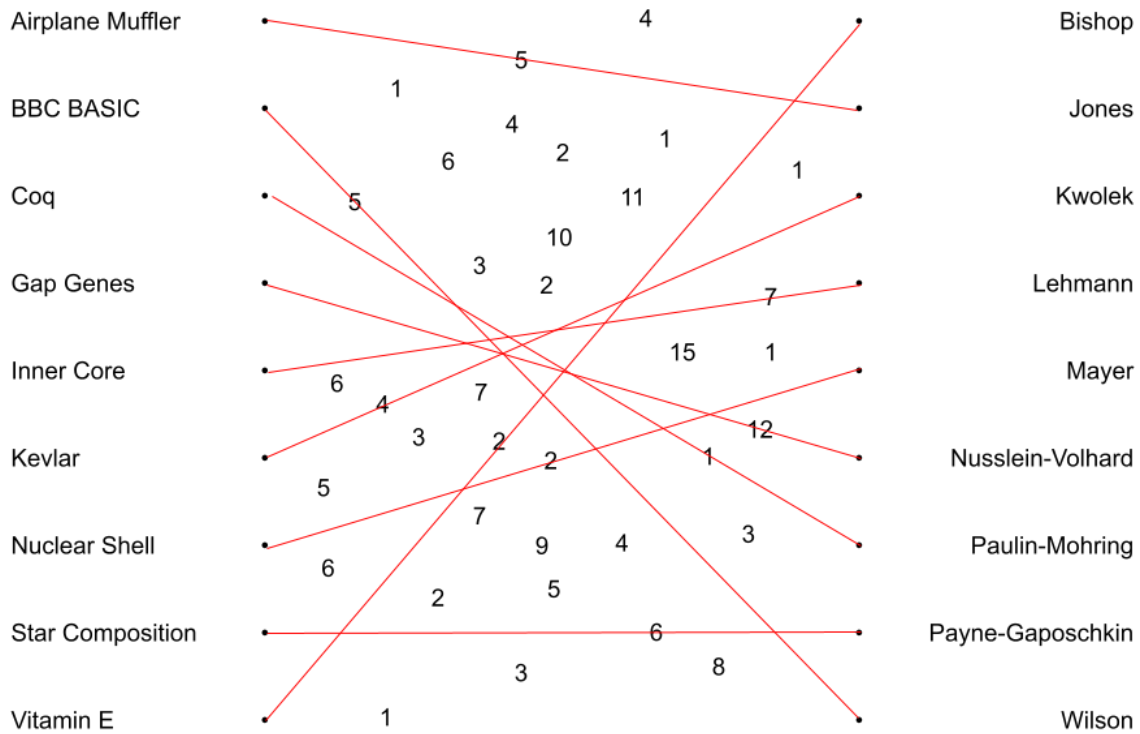
Indexing based off these numbers would get you:

D, U, N, E, S

Hence, the answer is DUNES.

Lost & Found Solution

The flavor text clues that we need to match the discoveries with each of their discoverers. Doing so reveals a number associated with each pair.



Indexing each number into the associated scientists (the 2nd letter of Bishop, the 5th letter of Jones, etc.) gives 'ISLNAHPGO', which doesn't mean anything. From the flavor text, one idea might be to order the letters based on the year when each scientist made their discovery. Doing so yields 'SIGNALHOP', a much more promising answer. However, the flavor text asks for a scientist's name. If solvers search for the inventor of the signal hop, they'll find it's better known name, frequency hopping, which was discovered by actress/scientist **HEDY LAMARR**, the solution for this puzzle.

Monopoly: inteGIRLS Edition Solution

The pairs of numbers on the side represent dice rolls as two six- faced dice are typically used. The flavor text provides clues to use the FIRST letter of each PROPERTY that you land on. So for the first move: $3 + 2 = 5$ and moving forward 5 spaces from the start at GO we get to **Reading Railroad**. Keep doing this and you'll get to the following:

- **E**lectric Company
- **I**llinois Avenue
- **N**orth Carolina Avenue

In the next move, you will hit GO. GO is not a property, so you do not record it.

- **V**ermont Avenue
- **E**lectric Company
- **S**t. James Place
- **T**ennessee Avenue

Now, by taking the first letters of each of these properties, you get **REINVEST**, which is the final answer.

Prima Solution

1. The flavor texts italicized words that have to do with starting, which indicates that a solver should look at the first letters of the words surrounded by dashes. The first letters of the words in each of the lines next to a girl spell out the names of famous ballets. Also, the title, “Prima,” is a bit of a pun, because prima means first in Italian.
 - “Chin in now! Don’t ever relax elbow locks, Lilliane Anna” => Cinderella
 - “Spine lengthened. Extend ever poised importance. Neck gracefully bowed. Eleanor, avoid uttering tremulous yawns.” => Sleeping Beauty
 - “Neatly under the center rotational axis Clarice. Kathleen, eliminate rigidity.” => Nutcracker
 - “Sway wistfully, Annabelle. New leads always keel excessively.” => Swan Lake
2. Anyone who has taken dance has probably recognized the positions that the girl in the pictures is in as some of the basic positions of ballet. Going from top to bottom, the girl is in...
 - First Position
 - Third Position
 - Fifth Position
 - Fourth Position
3. The first letters of the line at the top spell out the word INDEX, which is the final step of this puzzle. To finish the puzzle, indexing into the names of each of the ballets using the position next to the line.
 - Cinderella (1) => C
 - Sleeping Beauty (3) => E
 - Nutcracker (5) => R
 - Swan Lake (4) => N

The answer to this puzzle is **CERN**, the European Organization for Nuclear Research! The current head of CERN, Fabiola Gianotti, studied ballet and music before becoming a physicist.

Variables Solution

1. The video clip referenced in the flavor text is of the Pixar short, La Luna, about how a grandfather, a father, and a son change the phases of the moon. I highly recommend watching it! They get there using a ladder, which is how you solve this puzzle.
2. The puzzle is a word ladder, which is a common quiz format on Sporcle. This means that each word is one letter different from the word before and the word after. Each word is four letters long, as denoted by the four underscores. If you fill out the chart, this is what you get.

A young lady (one might be doing this puzzle!)	GIRL
Aquatic respiratory organ	GILL
Window ledge	SILL
Moth derived fiber	SILK
Mammal derived fluid	MILK
Spicy specification	MILD
Feral, savage, untamed	WILD
To droop, as a plant	WILT
Shift askew	TILT
Bathroom flooring	TILE
Gallbladder substance, or vomit	BILE
Hay storage unit	BALE
50% off on select items	SALE
Lightly hued	PALE
Pour down concrete	PAVE
Trim around the edges (not a fruit!)	PARE
Cheese paired with chicken	PARM
Textural treatment	PERM
Semester, trimester, or quarter	TERM
To be full of	TEEM
Appear as if	SEEM
Sci, Tech, Eng, Math	STEM

3. Looking at the changed letter from the previous word in the answers to the bolded clues gets you the final answer.
- Gill => **S**ill: S
 - Wild => W**I**lt: T
 - Bile => B**A**le: A
 - Pave => P**A**re: R
 - Teem => **S**eem: S

The answer to this puzzle is **STARS!** Stars are what the surface of La Luna is covered in according to the Pixar short.

This puzzle was inspired by astronomer Henrietta Swan Leavitt discovered cepheid variables, a kind of star that has a regular brightness. These are used to measure the distance between the Earth and other celestial bodies.

MEDIUM – 200 points

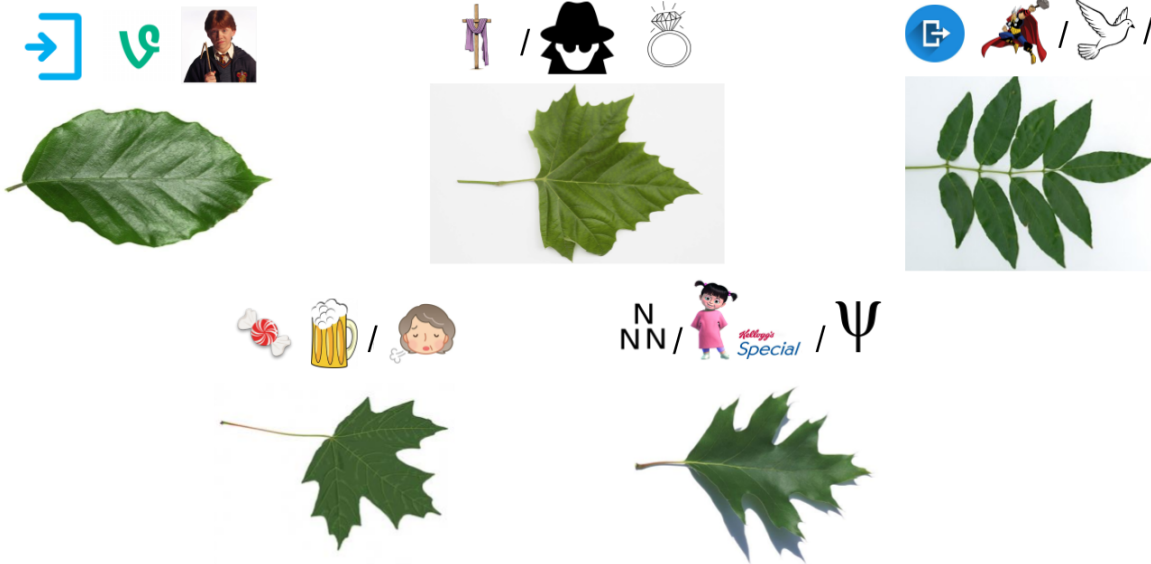
Don't Think Outside the Box Solution

If you follow the flavor text literally and actually spin the puzzle and read the letters, you will find that it is (almost) the exact same arrangement of letters. This arrangement of letters is entirely rotationally symmetric, except in exactly eight places. You can break the square up into eight rings that surround the center, and you will find that the symmetry is broken once in each ring:

WCFWUJHITHFTABGW
GLUSZVYPEAANPRLC
BRJPYYCRRMOXLJUF
APL**M**SWCKNHCACPSW
TNXASVGTOWHSSYZU
FAOCWFIJECFVWYVJ
HAMHHCYWTYIGCCYH
TERNOE**T**OOWJTKRPI
IPRKTJW**O**Y**T**EONRET
HYCCGI**R**TWYCHHMAH
JVYWVFC**T**JIFWCOAF
UZYS**S**EHOTGVSAXNT
SSPCACHNKCWSC LPA
FUJLXOMR**M**CYYPJRB
CLRPNAEPYVZSU**Y**G
WGBATFHTIHJUWFCW

If you take the letters in each ring that break the symmetry and arrange them from the outside in, you should get the answer, **SYMMETRY**.

Four-rest Solution



Arrange the leaves alphabetically using reverse image search:

1. Ash
2. Beech
3. Maple
4. Oak
5. Sycamore

Then, once all the photos are in order, sound out the small pictures on top to get:

Out thor / dove / in vine ron mint ale / sigh Ns / boo Kay / psi lent / spy ring

This sounds like 'Author of environmental science book silent spring' – who is Rachel **CARSON**, the answer to this puzzle.

He Loves Me, He Loves Me Not Solution

The puzzle is a list of 25 daisies with a certain number of petals, with botanical terms underneath each one. As the flavor text suggests, these daisies must be split up into two groups in order to extract the answer.

The title of the puzzle is a reference to the well-known game where someone picks petals off of a daisy and alternates between saying “he loves me” and “he loves me not” for each petal. If there are an odd number of petals on the daisy, the game will end with the person saying “he loves me” and if there are an even number of petals, the game will end with “he loves me not.” Solvers should divide the daisies in the puzzle into two groups, based on whether the number of petals is odd or even. Then, they should use the number of petals to index into the botanical terms.

Odd number of petals

Word	Number of Petals	Letter
rachis	3	C
deciduous	7	O
cotyledon	7	D
pollen	5	E
germination	11	N
cultivar	7	A
herbarium	9	M
photosynthesis	11	E
taproot	5	O
rainforest	5	F
isidium	7	M
leaf	3	A

Even number of petals

Word	Number of Petals	Letter
stem	4	M
pedicel	4	I
evergreen	8	E
tree	4	E
haustorium	8	I
glabrous	8	S
thyrses	6	E
stamen	6	N
chlorophyll	8	H
dicot	4	O
flower	4	W
raceme	6	E

The resulting message when the two groups are combined is “CODE NAME OF MAMIE EISENHOWER.” The answer is former first lady Mamie Eisenhower’s Secret Service code name, which is **SPRINGTIME**.

Hidden Figures Solution

- 1) The first step is to solve each of the mini-crosswords of the puzzle.
- 2) The italicized clues indicate that you should look at the corresponding answer. The words are *Look Into The Title Again*, hinting that the title “Hidden Figures” is a clue to getting the solution.
- 3) After you solve all of the puzzles, look back at the flavor text. The bolded and colored letters correspond to the answers in the puzzle, with 1 to 3 letters from the answer that matches that clue.
 - In the first crossword, **M**outh delivered or **t**aken clues the word **ORAL**. The three colored letters in the clue, O, R, and A, appear in that order in the word.
- 4) If you color in the squares that have the colored letters from the corresponding clue, you end up with letters. These letters are the title “Hidden Figures.” All of the crosswords with their solutions and gridded letters are on the next page.
 - 1: O
 - 2: R
 - 3: B
 - 4: I
 - 5: T

The final answer to this puzzle is **ORBIT**. Katherine Johnson, the mathematician who inspired this puzzle worked as a computer at NASA to put John Glenn into orbit!

O	R	A	L
B	O	N	O
A	L	S	O
M	E	E	K
A	S	L	

Across:

- 1) Mouth delivered or taken
- 5) Cher's first husband
- 6) As well
- 7) Modest
- 8) Gallaudet University lang.

Down:

- 1) 44th President
- 2) Thespian parts
- 3) Actor Elgort
- 4) *Take a gander*

R	A	M	I
E	V	E	N
N	E	A	T
A	R	L	O
L	Y	S	

Across:

- 1) Bohemian Rhapsody actor Malek
- 5) Tied or two divisible
- 6) Not messy
- 7) "Good Dinosaur" title figure
- 8) Fleur-de-___ symbol (var.)

Down:

- 1) Kidney related
- 2) Bugs bunny creator Tex
- 3) Lunch and dinner
- 4) "___ the Woods"

P	O	S	T
O	U	C	H
E	T	R	E
T	I	E	
S	E	W	

Across:

- 1) Paper of DC
- 5) Outcry in pain
- 6) French "to be"
- 7) Knot together
- 8) Use needle and thread

Down:

- 1) Rhyme writers
- 2) Innie complement
- 3) Helical simple machine
- 4) None of ___ above

I	N	S	T
N	O	T	I
D	U	E	T
I	N	T	L
A	S	H	E

Across:

- 1) MIT's center, for short
- 5) Denial words
- 6) Tune for a pair
- 7) Adj. for LAX, and DEN
- 8) Arthur ____, tennis champ

Down:

- 1) Capital at New Delhi
- 2) Sentence subjects
- 3) Doctor listening device, for short
- 4) This one's is "Hidden Figures"

T	I	N	A
S	L	O	G
P	I	T	A
	A	R	I
	D	E	N

Across:

- 1) Thirty Rock's Fey as Liz Lemon
- 5) Long, tedious task
- 6) Middle eastern flatbread
- 7) Singer Grande for short
- 8) Bear bedroom

Down:

- 1) Small recipe qty.
- 2) Trojan war epic
- 3) _____ Dame Cathedral
- 4) *Once more!*

Interview with an Electron Solution

Chien-Shiung Wu found that electrons given off in beta decay were always given off in a direction opposite the spin. This puzzle does the same thing. Let's look at an example:

Question 1: Mx. Electron, if you could only watch one Star Trek show in your life, which show would it be?

Star Trek: Deep **S**pace **N**ine OR Star Trek: The Original Series

The "spin" in this question is the letters s-p-i-n, which appears in Deep Space Nine but not in The Original Series, so The Original Series is the answer. Looking at the rest of the questions in the same way, the answers turn out to be the following:

Star Trek: The Original Series
Lake Ontario
Ten Things I Hate About You
Movie Theater
Pyromaniac
Motionless in White

The next step is to look at the last sentence in the flavor text. The last bit of information in the last letter in each phrase, which when combined gives the string "e-source." This should be interpreted as e-, or electron, source, which, as mentioned in the flavor text to this puzzle, is **COBALT**.

Rainbow Solution

Each name and emoji pair represents a year. If the name is followed by a skull, it should be replaced by that person's death; if it's a medal, it should be replaced with the year that person received a particular award (specifically a Nobel prize); if it's a book, it should be replaced with the year that person published a particularly well-known book; if there is no emoji following the name, then it should be substituted with the year that person was born. Those substitutions give the following numbers:

[415 + 1962 - 1672][1404][1825 - 1307]
[1615][1209][2009][1863 - 1561 + 2014 - 2013]12
[2001 + 404][1185 - 1292 + 1916]19
[121][2009][1913]
[1689 + 935]
[1801][2018 - 1609]15

When the math is done, the solver gets the following numbers:

[0705][1404][0518]
[1615][1209][2009][0301]12
[2405][1809]19
[0121][2009][1913]
[2624]
[1801][0409]15

If these numbers are split into pairs and associated with letters (01 is replaced with A, 02 with B, etc.), one gets the following words:

07 05 14 04 05 18	Gender
16 15 12 09 20 09 03 01 12	Political
24 05 18 09 19	Xeris
01 21 20 09 19 13	Autism
26 24	ZX
18 01 04 09 15	Radio

What do these words have in common? They are all followed by the word **SPECTRUM**, which is the answer for the puzzle.

Similar Similes Solution

Each line contains a simile, which compares two different things for dramatic effect. Each simile is very similar to a commonly used simile (as plain as day, as white as snow, etc.) – except one word in the simile has been replaced with a synonym of a word that is very similar, but is just one letter off. For example, in the first line, “flock’d as nails” becomes “herd as nails”, which, when the E is replaced with an A, becomes “hard as nails”. When the solver takes each of the letters substituted from the original similes, they get the following results:

Line From Puzzle	Simile With Synonym Replaced	Original Letter Substituted
Your heart is as flock’d as nails. With the moon as white as unhurried And the stars as plain as withered, Your mouth remains as stubborn as a completely silent person; Yet, your mind is as broken as a bee, With wit is as sharp as a burlap bag. The time passes as slow as a toothy growl With the night as black as a young horse And the clouds as long-stick’d as death, The world as achievement’d as a pancake.	H <u>E</u> RD AS NAILS WHITE AS S <u>L</u> OW PLAIN AS D <u>R</u> Y STUBBORN AS A M <u>U</u> TE B <u>U</u> ST AS A BEE SHARP AS A S <u>A</u> CK SLOW AS SN <u>A</u> RL BLACK AS F <u>O</u> AL P <u>O</u> LE AS DEATH F <u>E</u> AT AS A PANCAKE	A N A L Y T I C A L
Your heart is as slippery as a jelly But with determination as hard as postage Our love is as snug as a bug in a ditch Though they say it is as uninteresting as a bat, It is as checkered as day that you are as desire’d as an owl.	AS SLIPPERY AS AN <u>G</u> EL AS HARD AS <u>M</u> AILS AS SNUG AS A BUG IN A R <u>U</u> T B <u>L</u> AND AS A BAT AS PLA <u>I</u> D AS DAY W <u>I</u> SH AS AN OWL	E N G I N E

When combined, the final answer is **ANALYTICAL ENGINE** – the ‘mechanical device’ for which Ada Lovelace wrote the first program.

The User's Handbook to Mathematics Solution

This is a puzzle based around math theorems, clued by the flavor text. Each paragraph clues a name of a math theorem.

- “With the help of some tree roots, Alice, Bob, and Carl were able to catch the four rats fair and *square*.” **QUADRATIC** (extract A) - clued by **A(lice), B(ob), and C(arl), four (quad) rats, square (roots)**
- “Alice, Bob, and Carl are on vacation in Greece. The amount of square pasta that Alice and Bob have altogether ends up being equal to the amount that Carl has.” **PYTHAGOREAN** (extract G) - clued by **A(lice), B(ob), and C(arl), Greece, “square” pasta**
- “George is buying new shoes, but needs Jordans that fit the exact curve of his feet. Before leaving, he checks the temperature.” **KELVIN-STOKES** (extract N) - clued by **Jordans curving (Jordan curve), temperature (George Kelvin)**
- “Before my death, I would like to say that my children Alice, Bob, and Carl will not get any of my money, no matter how many times they try. - Pierre” **FERMAT’S LAST** (extract E) - **A(lice), B(ob), C(arl), Pierre Fermat, “no matter how many times” - the theorem proves that $a^n + b^n = c^n$ does not work for any exponents (“how many times”)**
- “Gordon is trying to organize his pantry by color, but he wants to see how many ways he can order red and blue items.” **RAMSEY’S** (extract S) - clued by **Gordon (Ramsey), organize by color, red and blue**
- “At a certain magical clinic, a hallway appears that seems to go forever. Investigations on the origin of this hallway come up indeterminate.” **L’HOPITAL’S RULE** (extract I) - clued by **clinic (ho(s)pital), go on forever (infinity), indeterminate (theorem is used when original limit is indeterminate)**

The red letters make **AGNESI** as the solution, who wrote the “handbook” that the title references.

Think Fast Solution

In order to solve this puzzle, one must first inspect the flavor text to see the mention of cranial nerves. What could be given to our cranial nerves to reach the solution of the puzzle? You can start with the numbers given.

Our twelve cranial nerves are as follows: the olfactory nerve (I), the optic nerve (II), oculomotor nerve (III), trochlear nerve (IV), trigeminal nerve (V), abducens nerve (VI), facial nerve (VII), auditory nerve (VIII), glossopharyngeal nerve (IX), vagus nerve (X), accessory nerve (XI), and the hypoglossal nerve (XII), or abbreviated OOOTTAFAGVAH.

We cannot add numbers to letters as they are, but we can by making A=1 and Z=26.

The string OOOTTAFAGVAH becomes 15-15-15-20-20-1-6-1-7-22-1-8. Adding our given list of numbers 12-14-14-11-18-4-12-0-13-13-14-6, we get 27-29-29-31-38-5-18-1-20-35-15-14.

This list of numbers has a few that are greater than 26, but notice that we have to keep some things in “*moderation*.” Taking each number modulo 26, we get 1-3-3-5-12-5-18-1-20-9-15-14. With the same A1Z26, that spells out **ACCELERATION**.

HARD – 500 points

Contagion Solution

1. The flavor text in this puzzle doesn't actually give you any clues about how to solve the puzzle, it's all in the message. The flavor text just sets the scene.
2. The real first step of this puzzle is to determine the method of contagion, which you can do by looking at the red region/East Asia example. The virus only spreads to hubs that are connected to the origin hub by a yellow line and are alphabetically after the origin hub. Here's how it works.
 - On the first day, Seoul is infected. It's connected to Beijing, Shanghai, and Tokyo.
 - Since Beijing is alphabetically before Seoul, it does not get infected. Shanghai and Tokyo do get infected.
 - The virus cannot cross between different colored regions.
3. Beginning with the spontaneous outbreak hubs, follow the virus through each of the regions from the map on the second page using the rules from the last step.
4. The message indicates that there are some of the hubs that do not become infected. Those hubs are:
 - Red:
 - Beijing, China
 - Bangkok, Thailand
 - Black:
 - Cairo, Egypt
 - Moscow, Russia
 - Baghdad, Iraq
 - Muscat, Oman
 - Salalah, Oman
 - Blue:
 - Atlanta, USA
 - St. Petersburg, Russia
 - Yellow:
 - Lima, Peru
5. The last sentence before the P.S. says to look at the beginnings of the countries, which clues the first letters. Those letters are C, T, E, R, I, O, O, U, R, and P.
6. The words "mixed up" are bolded at the end of the puzzle to clue that the last step of the puzzle is to anagram all of these letters. This gets you your final answer.

The answer to this puzzle is **PUERTO RICO**, the birthplace of Dr. Antonia Novello, the first female and the first person of color Surgeon General of the United States.

Grocery Shopping Solution

- 1) 6.62 lb = 3 kg Tomatoes (m)
- 2) 8.82 lb = 4 kg Anchovies (h)
- 3) 22.05 lb = 10 kg Romaine lettuce (t)
- 4) 21.14 cups = 5 L Soy Sauce (a)
- 5) 2.21 lb = 1 kg Croutons (c)
- 6) 4.41 lb = 2 kg Arugula (r)
- 7) 2.21 lb = 1 kg Parmesan cheese (p)
- 8) 8.82 lb = 4 kg Cumin (i)
- 9) 2.21 lb = 1 kg Egg yolk (e)
- 10) 8.82 lb = 4 kg Avocado (c)
- 11) 8.46 cups = 2 L Lemon juice (e)
- 12) 4.41 lb = 2 kg Duck (u)
- 13) 11.03 lb = 5 kg Black Pepper (k)
- 14) 13.23 lb = 6 kg Ginger (r)
- 15) 4.41 lb = 2 kg Pickle (i)
- 16) 13.23 lb = 6 kg Chicken (e)
- 17) 4.23 cups = 1 L Worcestershire sauce (w)
- 18) 4.41 lb = 2 kg Rice (i)
- 19) 25.37 cups = 6 L Olive oil (o)
- 20) 8.82 lb = 4 kg Potatoes (a)

First, eliminate all the non-prime ingredients — that is, the ingredients whose number in the list is not a prime number (#1,4,6,8,9, ...), leaving only the ‘prime ingredients’ (#2,3,5,7, ...)

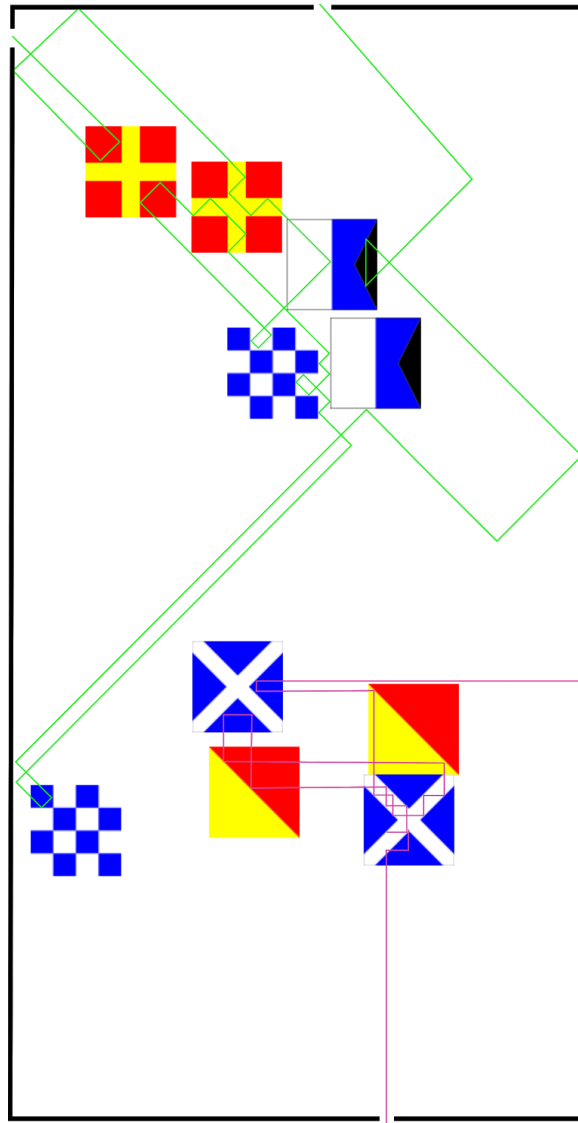
The phrase “scientific standards” in the flavor text hints at using liters and kg instead of lbs and cups, as these units are more common in scientific study. Convert all the amounts to liters and kg, as shown above. The resulting numbers are all integers. Use these numbers to index into every ingredient to find a letter, also shown in parentheses above. Doing this results in the letters ‘htcpekwo’.

If the solver searches up all the prime ingredients (clued by the phrase “what Mme Curie could be making”), they’ll find they are the ingredients for *Caesar* salad. Using the *Caesar* cipher, shift the letters ‘htcpekwo’ backwards by 2 (clued by the phrase “making for 2”) to get **FRANCIUM**, which is the answer.

Bonus: if you index into all the non-prime ingredients you would get ‘marie curie ia’.

Star Sailor Solution

Each group of squares with a certain number represent the differently-colored parts of an international maritime signal flag. The color of the square indicates the color of that part of the flag, and the way that the light reflects off of the interior of the box indicates its shape. These are the components:



When recombined, the squares represent maritime flags, which, when reassembled and put in order, spell:



Hence, the answer is **ROMAN** – the last name of *Nancy Roman*, widely considered to be the ‘Mother of Hubble’ for her role in planning the Hubble Space Telescope.