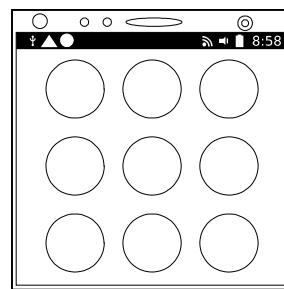


## On the Subject of The Samsung

If you have a hard time keeping up with Apple phones and which version is which, you'll have a horrible time with Samsung's.

This module consists of 9 apps, in random positions, except for settings, which will always be in the center.



To solve the module, factory reset the phone by entering an 8-digit pin in the settings app, obtaining one digit from each other app.

In order to allow for as much screen space as possible, the status light has been omitted. The front camera serves as a replacement.

| App:                 | Icon: |
|----------------------|-------|
| Duolingo             |       |
| Google Maps          |       |
| Kindle               |       |
| Google Authenticator |       |

| App:                  | Icon: |
|-----------------------|-------|
| Photomath             |       |
| Spotify               |       |
| Google Arts & Culture |       |
| Discord               |       |

On the home screen, click an app to enter it. This will enable the home button, which is a clickable area at the bottom of the screen, taking you back to the home screen.

Submitting an incorrect pin will incur a strike, but the solution will never change.

**Duolingo:**

Three words will be displayed, written in a foreign language. They will spell out a simple math expression (e.g. "five plus nine"). Calculate the answer to this expression, then add that to the digit corresponding to the language the expression is written in. Take that the absolute value of that modulo 10 as this app's digit.

Ignore all decimals when calculating.

| Word:     | Spanish:<br>(1) | Italian: (2) | Chinese:<br>(3) | French:<br>(4) | Afrikaans:<br>(5) |
|-----------|-----------------|--------------|-----------------|----------------|-------------------|
| Zero      | Cero            | Zero         | 零               | Zéro           | Nul               |
| One       | Uno             | Uno          | 一               | Un             | Een               |
| Two       | Dos             | Due          | 二               | Deux           | Twee              |
| Three     | Tres            | Tre          | 三               | Trois          | Drie              |
| Four      | Cuatro          | Quattro      | 四               | Quatre         | Vier              |
| Five      | Cinco           | Cinque       | 五               | Cinq           | Vyf               |
| Six       | Seis            | Sei          | 六               | Six            | Ses               |
| Seven     | Siete           | Sette        | 七               | Sept           | Sewe              |
| Eight     | Ocho            | Otto         | 八               | Huit           | Agt               |
| Nine      | Nueve           | Nove         | 九               | Neuf           | Nege              |
| Ten       | Diez            | Dieci        | 十               | Dix            | Tien              |
| Eleven    | Once            | Undici       | 十一              | Onze           | Elf               |
| Twelve    | Doce            | Dodici       | 十二              | Douze          | Twaalf            |
| Thirteen  | Trece           | Tredici      | 十三              | Treize         | Dertien           |
| Fourteen  | Catorce         | Quattordici  | 十四              | Quatorze       | Veertien          |
| Fifteen   | Quince          | Quindici     | 十五              | Quinze         | Vyftian           |
| Sixteen   | Dieciséis       | Sedici       | 十六              | Seize          | Sestein           |
| Seventeen | Diecisiete      | Diciassette  | 十七              | Dix-sept       | Sewentein         |

| Word:      | Spanish: (1) | Italian: (2) | Chinese: (3) | French: (4)   | Afrikaans: (5) |
|------------|--------------|--------------|--------------|---------------|----------------|
| Eighteen   | Dieciocho    | Diciotto     | 十八           | Dix-huit      | Agtien         |
| Nineteen   | Diecinueve   | Diciannove   | 十九           | Dix-neuf      | Negentien      |
| Twenty     | Veinte       | Venti        | 二十           | Vingt         | Twintig        |
| Plus       | Más          | Più          | 加            | Plus          | Plus           |
| Minus      | Menos        | Meno         | 減            | Moins         | Minus          |
| Times      | Por          | Per          | 乘            | Multiplié par | Vermeerder     |
| Divided by | Divido por   | Diviso       | 除            | Divisé par    | Verdeel        |

| Word:  | Swahili: (6)  | Japanese: (7) | Korean: (8) | Mongolian: (9) | Thai: (10) |
|--------|---------------|---------------|-------------|----------------|------------|
| Zero   | Sufuri        | ゼロ            | 영           | Тэг            | ศูนย์      |
| One    | Moja          | 一             | 일           | Нэг н          | หนึ่ง      |
| Two    | Mbili         | 二             | 이           | Хоёр           | สอง        |
| Three  | Tatu          | 三             | 삼           | Гурав          | สาม        |
| Four   | Nne           | 四             | 사           | Дөрөв          | ສື່        |
| Five   | Tano          | 五             | 오           | Тав            | ห້າ        |
| Six    | Sita          | 六             | 육           | Зургаа         | ທກ         |
| Seven  | Saba          | 七             | 칠           | Долоо          | ເຈົດ       |
| Eight  | Nane          | 八             | 팔           | Найм           | ແປດ        |
| Nine   | Tisa          | 九             | 구           | Есөн           | ເກົ້າ      |
| Ten    | Kumi          | 十             | 십           | Арав           | ສີບ        |
| Eleven | Kumi na Moja  | 十一            | 십일          | Арван нэг      | ສີບເອັດ    |
| Twelve | Kumi na Mbili | 十二            | 십이          | Арван Хоёр     | ສີບສອງ     |

| Word:         | Swahili: (6)    | Japanese: (7) | Korean: (8) | Mongolian: (9) | Thai: (10) |
|---------------|-----------------|---------------|-------------|----------------|------------|
| Thirteen      | Kumi na<br>Tatu | 十三            | 십삼          | Арван Гурав    | ສິບສາມ     |
| Fourteen      | Kumi na Nne     | 十四            | 십사          | Арван Дөрөв    | ສິບສີ      |
| Fifteen       | Kumi na<br>Tano | 十五            | 십오          | Арван таван    | ສິບຫ້າ     |
| Sixteen       | Kumi na<br>Sita | 十六            | 십육          | Арван Зургаа   | ສິບທກ      |
| Seventeen     | Kumi na<br>Saba | 十七            | 십칠          | Арван Долоо    | ສິບເຈັດ    |
| Eighteen      | Kumi na<br>Nane | 十八            | 십팔          | Арван Найм     | ສິບແປດ     |
| Nineteen      | Kumi na<br>Tisa | 十九            | 십구          | Арван Ес       | ສິບເກົາ    |
| Twenty        | Ishirini        | 二十            | 이십          | Хорин          | ຢືນ        |
| Plus          | Pamoja          | プラス           | 더하기         | Дээрээс нь     | ບວກ        |
| Minus         | Kasoro          | マイナス          | 빼기          | Хасах          | ລບ         |
| Times         | Kuzidisha       | かける           | 곱하기         | Үржүүлэх       | ຄຸນ        |
| Divided<br>by | Gawanya         | 割る            | 나누기         | Хуваана        | หารດ້ວຍ    |

**Google Maps:**

A pair of coordinates will be displayed, in latitude-longitude form. The digit for this app is the difference between the digits that correspond to the countries that contain these coordinates in the table below.

| 0             | 1              | 2      | 3      | 4            |
|---------------|----------------|--------|--------|--------------|
| United States | Canada         | Mexico | Russia | Germany      |
| 5             | 6              | 7      | 8      | 9            |
| Australia     | United Kingdom | China  | Brazil | South Africa |

**Kindle:**

Four words will be displayed. They are an excerpt from one of the quotes below. Every word has had its letters shifted forwards by a certain amount. The digit for this app is the digit that corresponds to the excerpt plus the amount the letters are shifted by, modulo 10. (Ignore all punctuation and casing.)

|   |  |   |   |
|---|--|---|---|
| 0 | "You have brains in your head. You have feet in your shoes. You can steer yourself any direction you choose."                                      | 5 | "We've all got both light and dark inside us. What matters is the part we choose to act on. That's who we really are."          |
| 1 | "There are darknesses in life and there are lights, and you are one of the lights, the light of all lights."                                       | 6 | "Do I love you? My God, if your love were a grain of sand, mine would be a universe of beaches."                                |
| 2 | "You never really understand a person until you consider things from his point of view, until you climb inside of his skin and walk around in it." | 7 | "Doublethink means the power of holding two contradictory beliefs in one's mind simultaneously, and accepting both of them."    |
| 3 | "Bet I know something else you don't. There's dew on the grass in this morning."   | 8 | "Maybe ever'body in the whole damn world is scared of each other."  |
| 4 | "We lived in the blank white spaces at the edges of print. It gave us more freedom."   | 9 | "There is an idea of a Patrick Bateman, some kind of abstraction, but there is no real me, only an entity, something illusory." |

### Google Authenticator:

This app displays 3 six-digit numbers. When the progress bar at the bottom disappears, 3 new numbers will be generated. Every number applies to one of the conditions listed below. The digit that corresponds to the condition is the digit for this app.

- 0. Digital root is 8
- 1. Modulo 3 is odd
- 2. Divisible by 7
- 3. Modulo 5 is odd
- 4. Digital root is 3 or 4
- 5. Divisible by 6
- 6. Digital root is 7
- 7. Divisible by 9
- 8. Digital root is 5
- 9. Divisible by 3

### Photomath:

Press the start button to cycle through a set of 4 mathematical symbols, each with a specific color. After the first cycle, a keypad written in symbols and some circles will appear, and the cycle can be repeated any time without consequence.

Take the grid below that corresponds to the last digit of the serial number. This is the placement of the digits on the keypad. Use this to associate symbols with digits. The colors of the circles on the bottom correspond to the operators +, -, \*, and / in that order.

Using the symbol that flashes in the corner once per cycle as the starting value, perform the operations in the order of the cycle, using the color for the operator and the symbol for the digit. Ignore all decimals. Take the absolute value, modulo 1000 and submit this answer using the keypad to get this app's solution in the form of its symbol. Use the green button to submit, and the red button to clear. Striking or playing the sequence again also clears input.

**Note:** When this app's digit is displayed, the keypad will be hidden, so keep track of each symbol's value.

| 1   | 2   | 3 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <table border="1"> <tr><td>3</td><td>7</td><td>1</td><td>4</td><td>6</td></tr> <tr><td>9</td><td>8</td><td>2</td><td>6</td><td>0</td></tr> </table> | 3   | 7 | 1 | 4 | 6 | 9 | 8 | 2 | 6 | 0 | <table border="1"> <tr><td>6</td><td>2</td><td>1</td><td>5</td><td>8</td></tr> <tr><td>3</td><td>7</td><td>0</td><td>4</td><td>9</td></tr> </table> | 6 | 2 | 1 | 5 | 8 | 3 | 7 | 0 | 4 | 9 | <table border="1"> <tr><td>5</td><td>4</td><td>6</td><td>9</td><td>3</td></tr> <tr><td>0</td><td>2</td><td>8</td><td>7</td><td>1</td></tr> </table> | 5 | 4 | 6 | 9 | 3 | 0 | 2 | 8 | 7 | 1 |
| 3   | 7   | 1 | 4 | 6 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 9   | 8   | 2 | 6 | 0 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 6   | 2   | 1 | 5 | 8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 3   | 7   | 0 | 4 | 9 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 5   | 4   | 6 | 9 | 3 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 0   | 2   | 8 | 7 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 4   | 5   | 6 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <table border="1"> <tr><td>3</td><td>1</td><td>7</td><td>4</td><td>0</td></tr> <tr><td>8</td><td>2</td><td>6</td><td>9</td><td>5</td></tr> </table> | 3   | 1 | 7 | 4 | 0 | 8 | 2 | 6 | 9 | 5 | <table border="1"> <tr><td>8</td><td>2</td><td>6</td><td>0</td><td>9</td></tr> <tr><td>4</td><td>7</td><td>5</td><td>3</td><td>1</td></tr> </table> | 8 | 2 | 6 | 0 | 9 | 4 | 7 | 5 | 3 | 1 | <table border="1"> <tr><td>9</td><td>3</td><td>5</td><td>4</td><td>2</td></tr> <tr><td>1</td><td>7</td><td>8</td><td>6</td><td>0</td></tr> </table> | 9 | 3 | 5 | 4 | 2 | 1 | 7 | 8 | 6 | 0 |
| 3   | 1   | 7 | 4 | 0 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 8   | 2   | 6 | 9 | 5 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 8   | 2   | 6 | 0 | 9 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 4   | 7   | 5 | 3 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 9   | 3   | 5 | 4 | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1   | 7   | 8 | 6 | 0 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 7   | 8   | 9 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <table border="1"> <tr><td>7</td><td>9</td><td>6</td><td>3</td><td>1</td></tr> <tr><td>5</td><td>0</td><td>2</td><td>4</td><td>8</td></tr> </table> | 7   | 9 | 6 | 3 | 1 | 5 | 0 | 2 | 4 | 8 | <table border="1"> <tr><td>0</td><td>4</td><td>8</td><td>7</td><td>5</td></tr> <tr><td>3</td><td>1</td><td>2</td><td>9</td><td>6</td></tr> </table> | 0 | 4 | 8 | 7 | 5 | 3 | 1 | 2 | 9 | 6 | <table border="1"> <tr><td>2</td><td>5</td><td>4</td><td>8</td><td>6</td></tr> <tr><td>3</td><td>9</td><td>0</td><td>1</td><td>7</td></tr> </table> | 2 | 5 | 4 | 8 | 6 | 3 | 9 | 0 | 1 | 7 |
| 7   | 9   | 6 | 3 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 5   | 0   | 2 | 4 | 8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 0   | 4   | 8 | 7 | 5 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 3   | 1   | 2 | 9 | 6 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 2   | 5   | 4 | 8 | 6 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 3   | 9   | 0 | 1 | 7 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 0   | <table border="1"> <tr><td>7</td><td>3</td><td>4</td><td>6</td><td>2</td></tr> <tr><td>0</td><td>9</td><td>8</td><td>5</td><td>1</td></tr> </table> | 7 | 3 | 4 | 6 | 2 | 0 | 9 | 8 | 5 | 1   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 7   | 3   | 4 | 6 | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 0   | 9   | 8 | 5 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

**Spotify:**

Press the play button to hear a snippet of a song. The position of the song playing in the table below (starting from 0) is the digit for this app. An ad will be played before the snippet.

| You Spin me Right Round | Smooth Criminal                     | Hardware Store | Beat It     | Danger Zone            |
|-------------------------|-------------------------------------|----------------|-------------|------------------------|
| Tacky                   | Harder, Better,<br>Faster, Stronger | Drunken Sailor | Megalovania | Any song not mentioned |

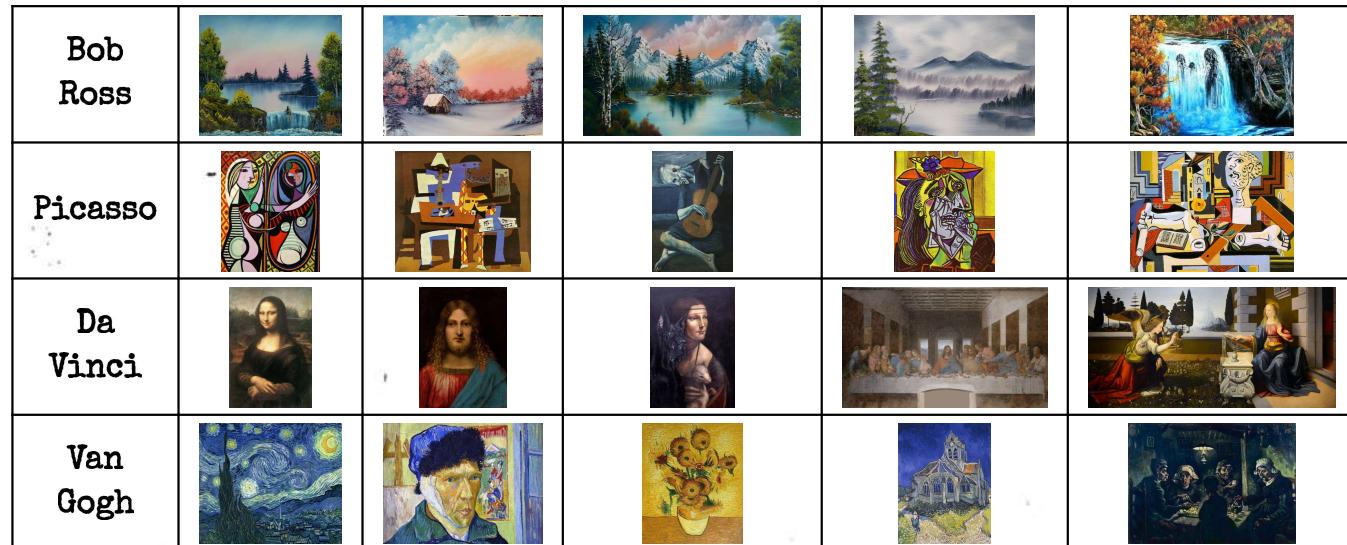
**Google Arts & Culture:**

A painting will be displayed, as well as some text stating the (alleged) artist. If the displayed painting is not shown in the following table, always use the last digit of the serial number as this app's digit. Otherwise, use the position of this app on the homescreen to obtain a starting digit:

|                   |                   |                   |
|-------------------|-------------------|-------------------|
| 1st of birth year | 2nd of birth year | 3rd of birth year |
| 4th of birth year | N/A               | 1st of death year |
| 2nd of death year | 3rd of death year | 4th of death year |

Identify the artist of the painting shown to obtain the starting digit. Consider each row in the table below to have its paintings numbered from 1 - 5, and call the index of the displayed painting n. If the text correctly identifies the artist, use the nth even digit in the set 0 - 9. If it doesn't, use the nth odd digit. Add this digit to the starting digit. The result modulo 10 is this app's digit.

|            | Bob Ross | Picasso | Da Vinci | Van Gogh |
|------------|----------|---------|----------|----------|
| Birth year | 1942     | 1881    | 1452     | 1853     |
| Death year | 1995     | 1973    | 1519     | 1890     |



(Open images in a new tab for a better view.)

**Discord:**

Multiple people's profile pictures will be displayed in a pattern. To determine the first person to call, observe a Braille letter, with the top left dot being the top left position on the module, to obtain a direction.

| Set:         | Braille characters in set:             | Direction:  |
|--------------|--|---|
| A            | B, G, N, O, V, X,<br>FOR, ED, GG, IN   | If the number of modules on the bomb is even, up, otherwise down                |
| B            | A, K, P, T, AND, BB,<br>CH, EN, OU, ST | If there is a lit MSA or NSA, left, otherwise right                             |
| C            | E, I, M, S, U, Y, CC,<br>EA, ER, OW    | If the serial number contains C, O, R, or A, down, otherwise left               |
| D            | C, F, L, Q, Z, THE,<br>AR, ING, SH, TH | If the number of batteries + the number of holders is even, up, otherwise right |
| E            | D, H, J, R, W, WITH,<br>FF, GH, OF, WH | If the SN doesn't contain a vowel, down, otherwise right                        |
| No character | N/A                                    | If an empty port plate is present, up, otherwise left                           |

This direction refers to the user that is the farthest that way, without being tied.

The first person you call will be doing an activity. Identify the activity, and press the mute button when the last digit of the timer is the activity's position in reading order in the table below. (Starting from 0.)

|                      |                 |                            |                          |                         |
|----------------------|-----------------|----------------------------|--------------------------|-------------------------|
| Defusing a bomb      | Playing Jackbox | Playing Tabletop Simulator | Reacting to a new module | Complaining about sleep |
| Experting for a bomb | Arguing         | Talking about food         | Being right back         | Any other activity      |

If this is done successfully, the user will describe a symbol and then a color, then the call will end.

The second user to call is the one whose name appears first on the following table, ignoring the first person you called, and using the direction you used as the column.

| Up:        | Right:     | Down:      | Left:      |
|------------|------------|------------|------------|
| TasThing   | Timwi      | Deaf       | Blananas   |
| Blananas   | eXish      | Procyon    | TasThing   |
| Numdegased | SillyPuppy | Espik      | Timwi      |
| Espik      | Nico Robin | Nico Robin | Numdegased |
| eXish      | Procyon    | Blananas   | eXish      |
| SillyPuppy | Numdegased | TasThing   | Espik      |
| Deaf       | Deaf       | Timwi      | Procyon    |
| Timwi      | Espik      | eXish      | Nico Robin |
| Nico Robin | Blananas   | SillyPuppy | Deaf       |
| Procyon    | TasThing   | Numdegased | SillyPuppy |

When the second user is called, a symbol will appear, cycling first through various symbols and then through colors. Submit the symbol and color that the user from the first call described. Use the mute button to submit the currently displayed symbol/color. When this is done successfully, the user will say a sentence containing this app's digit, and the call will end.

**Note:** The sentences containing digits may contain them as homophones.

**Note:** Users will **never** repeat themselves.

| TasThing   | Deaf  | Blananas | Timwi | Numdegased |
|------------|-------|----------|-------|------------|
|            |       |          |       |            |
| Nico Robin | Espik | Procyon  | eXish | SillyPuppy |
|            |       |          |       |            |

**Settings:**

Once every app's digit is obtained, submit the answer in this app, which will always be in the center. To determine the order of submission, first obtain a direction based on the first 2 characters of the serial number, where X represents a letter and # a number:

| XX    | X#   | #X    | ##   |
|-------|------|-------|------|
| North | East | South | West |

If a parallel port is present, move this direction one space counter-clockwise. Otherwise, if a serial port is present, move it one space clockwise. Otherwise, keep it as is.

The first digit of the solution is the digit of the app in this direction from the center. The second digit of the solution is the digit of the app 1 space clockwise from the first, and so on.

Enter the solution using the keypad and submit it to disarm the module. Use the green button to submit, and the red button to clear what you've typed.