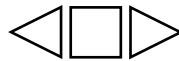


# Open the door... please?

PRINT PDF

## Riddle #2



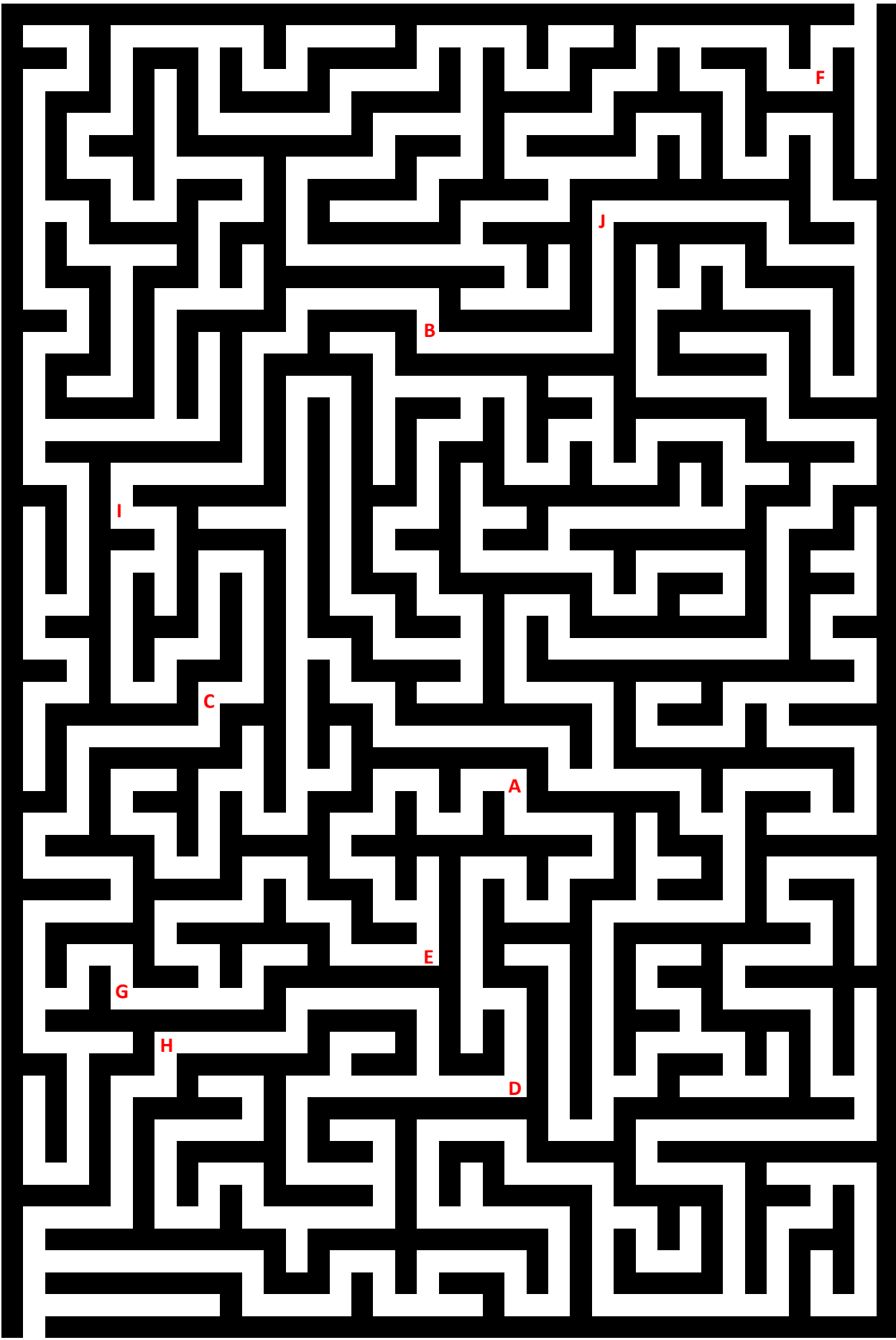

**Print this page and cut the squares.**

You will need both triangle cards, but only one of the square cards.

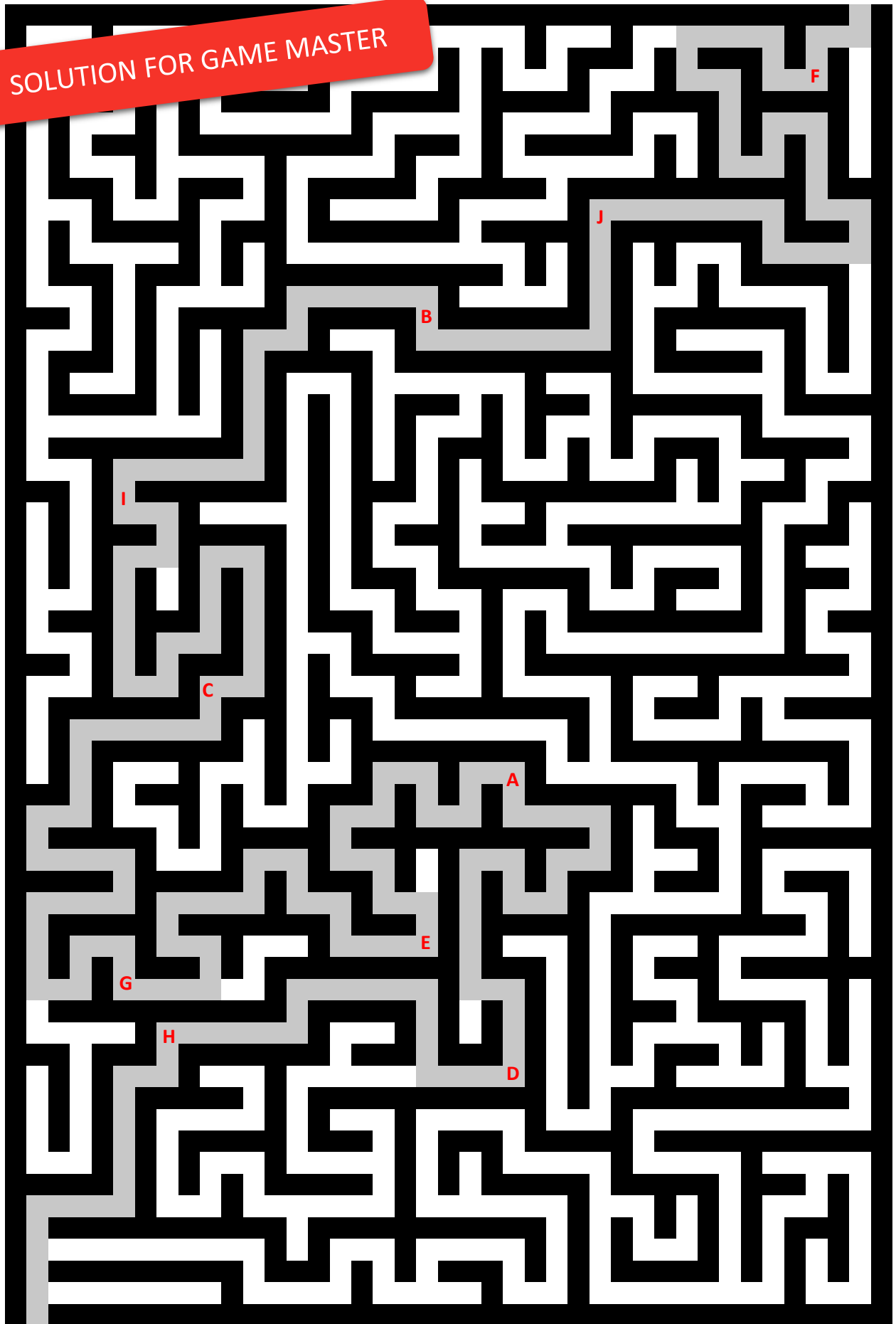
If your key safe/lock has a **3-digit code**, you will need the **orange** square.

If your key safe/lock has a **4-digit code**, you will need the **blue** square.

# MAZE RIDDLE – Part 1/2

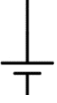
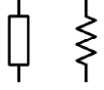

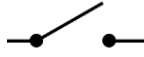





SOLUTION FOR GAME MASTER






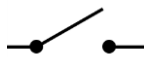



MAZE RIDDLE – Part 2/2

The names and descriptions of the symbols have been mixed up.  
**Find the correct names by solving the maze.**  
 The order in which you encounter the letters in the maze is the correct order.  
 Draw the connections between the symbols and names below:

	1
	2
	3
	4
	5
	6
I	7
$\Omega$	8
V	9
	10

A	<b>ELECTRIC CONSUMER</b> An electric consumer is any electronic device that feeds from the power source of the circuit, for example a lamp or even an electronic door.
B	<b>OHM</b> Ohm ( $\Omega$ ) is the unit for the resistance against which an electric current has to flow. The larger the resistance, the greater the barrier to the flow of current.
C	<b>CAPACITOR</b> A capacitor can store electrical energy and is used for transmitting a continuous flow of energy to electric consumers. It helps bridging potential, spontaneous changes of the current.
D	<b>RESISTOR</b> Resistors reduce the current flow and provide a specific voltage for an electric consumer.
E	<b>SWITCH</b> A switch is used to control the electric circuit. If it is closed, the current can flow through and feed the electric consumers. If it is open, the current cannot flow and no power is provided to the consumer.
F	Find this symbol to identify a correct card for the circuit board!
G	<b>TRANSISTOR</b> A transistor is a "transfer resistor" that can control the flow of electricity by switching or amplifying electric signals.
H	<b>POWER SOURCE / BATTERY</b> Every electronic circuit needs a power source from which the electric current can flow.
I	<b>CURRENT</b> Current is a different word for electricity and it should always flow in a closed circuit in order to be functional. The current is expressed in Ampere (A).
J	<b>VOLTAGE</b> Voltage expresses the "pressure" that a power source puts on an electric current in the circuit. The unit to measure this pressure is Volt (V).





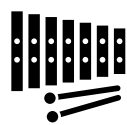


**SOLUTION FOR GAME MASTER**

<b>SOLUTIONS</b>		
	<p><b>POWER SOURCE / BATTERY</b></p> <p>Every electronic circuit needs a power source from which the electric current can flow.</p>	<b>1 – H</b>
	<p><b>RESISTOR</b></p> <p>Resistors reduce the current flow and provide a specific voltage for an electric consumer.</p>	<b>2 – D</b>
	<p><b>ELECTRIC CONSUMER</b></p> <p>An electric consumer is any electronic device that feeds from the power source of the circuit, for example a lamp or even an electronic door.</p>	<b>3 – A</b>
	<p><b>SWITCH</b></p> <p>A switch is used to control the electric circuit. If it is closed, the current can flow through and feed the electric consumers. If it is open, the current cannot flow and no power is provided to the consumer.</p>	<b>4 – E</b>
	<p><b>TRANSISTOR</b></p> <p>A transistor is a “transfer resistor” that can control the flow of electricity by switching or amplifying electric signals.</p>	<b>5 – G</b>
	<p><b>CAPACITOR</b></p> <p>A capacitor can store electrical energy and is used for transmitting a continuous flow of energy to electric consumers. It helps bridging potential, spontaneous changes of the current.</p>	<b>6 – C</b>
<b>I</b>	<p><b>CURRENT</b></p> <p>Current is a different word for electricity and it should always flow in a closed circuit in order to be functional. The current is expressed in Ampere (A).</p>	<b>7 – I</b>
<b>Ω</b>	<p><b>OHM</b></p> <p>Ohm (Ω) is the unit for the resistance against which an electric current has to flow. The larger the resistance, the greater the barrier to the flow of current.</p>	<b>8 – B</b>
<b>V</b>	<p><b>VOLTAGE</b></p> <p>Voltage expresses the “pressure” that a power source puts on an electric current in the circuit. The unit to measure this pressure is Volt (V).</p>	<b>9 – J</b>
	Find this symbol to identify a correct card for the circuit board!	<b>10 – F</b>

**ELECTRONIC PARTS RIDDLE**

**FIND AND HIGHLIGHT/CONNECT ALL SYMBOLS RELATED TO ELECTRONICS!**

**THE RESULTING SHAPE HELPS YOU FIND ANOTHER PIECE FOR THE CIRCUIT BOARD!**

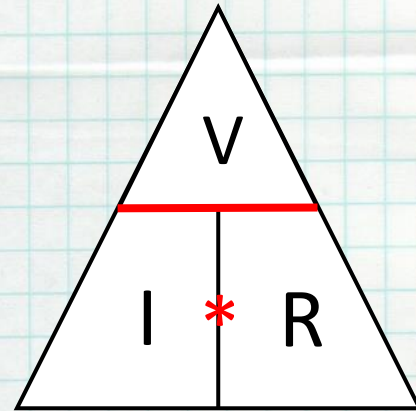
SOLUTION FOR GAME MASTER

SOLUTIONS						
						
						
						
						
						
						
						



# OHM'S LAW TRIANGLE

Cover the value you need  
to solve for with your  
hand.



Red line = division

Red star = multiplication

If the door is broken  
again, we probably have  
to replace the resistor  
with the correct  
resistance...

Power Source = 240 V

Current = 24 A

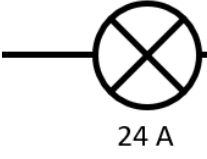


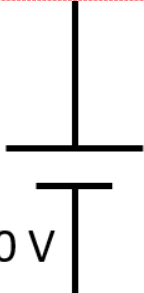
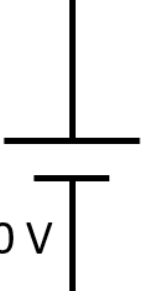

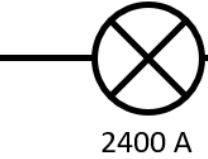
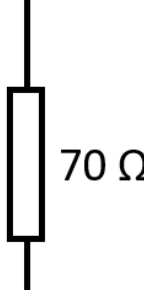




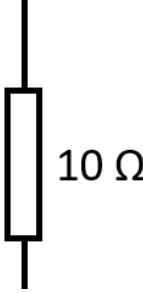








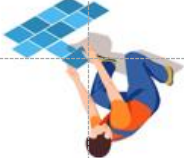



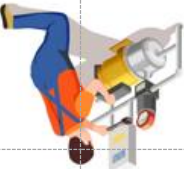
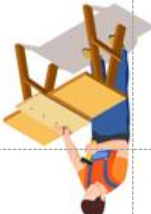




Resistance = \_\_\_  $\Omega$

**Print this page and cut out the note.**

Fold it twice, but make sure that the text is visible when it is folded (this makes it easier for player to identify it as a hint).



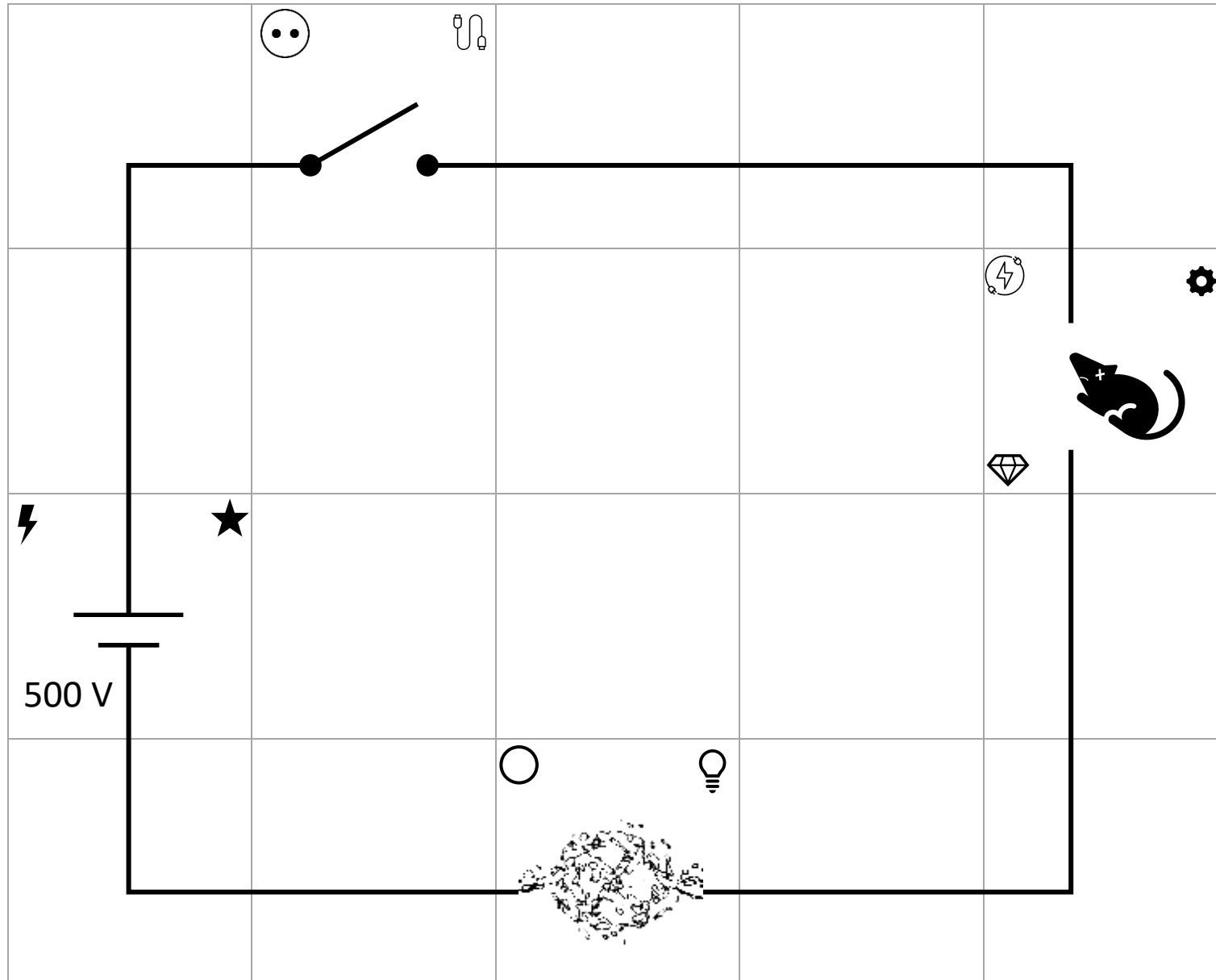


			
			
			
			
			
			
			
			<p>Complete the puzzle and find the electrician who can repair the door!</p>

CIRCUIT BOARD SOLUTION CARDS & JIGSAW PUZZLE

1. Cut along the red lines.
2. Fold the resulting shape in half to get a square and glue it together.
3. Cut along the grey lines.

# DAMAGED CONTROL ROOM DOOR CIRCUIT PLAN



## REPAIRED CONTROL ROOM DOOR CIRCUIT PLAN

SOLUTION FOR  
GAME MASTER

