

# POLUSVILLE

CENTER FOR DISEASE CONTROL

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## Good job with Phase 1!

You were able to eliminate vaccines 1, 7, and 8 from the list of nine. As a reward for your work, we have included a cutout of Nurse Needle who has been helping us administer the vaccines. Now I need you to work even harder. We are seeing more and more cases of SUS and so we need to go through Phase 2 and 3 as fast and as safely as we can. During these phases, the vaccines are given to several volunteers to assess their safety and ability to generate antibodies.

For this kit, your job is to assess the efficacy and safety of the remaining vaccines. You will be studying notes from the vaccine trials and ruling out any vaccines that have serious side effects, lack safety, or lack efficacy. Most importantly, if you feel that there is insufficient data on a vaccine, throw it out. Your goal is to **eliminate three more vaccines from the list of six**. Good luck and keep up the good work! Don't let us down!

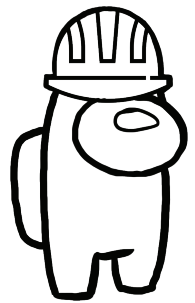
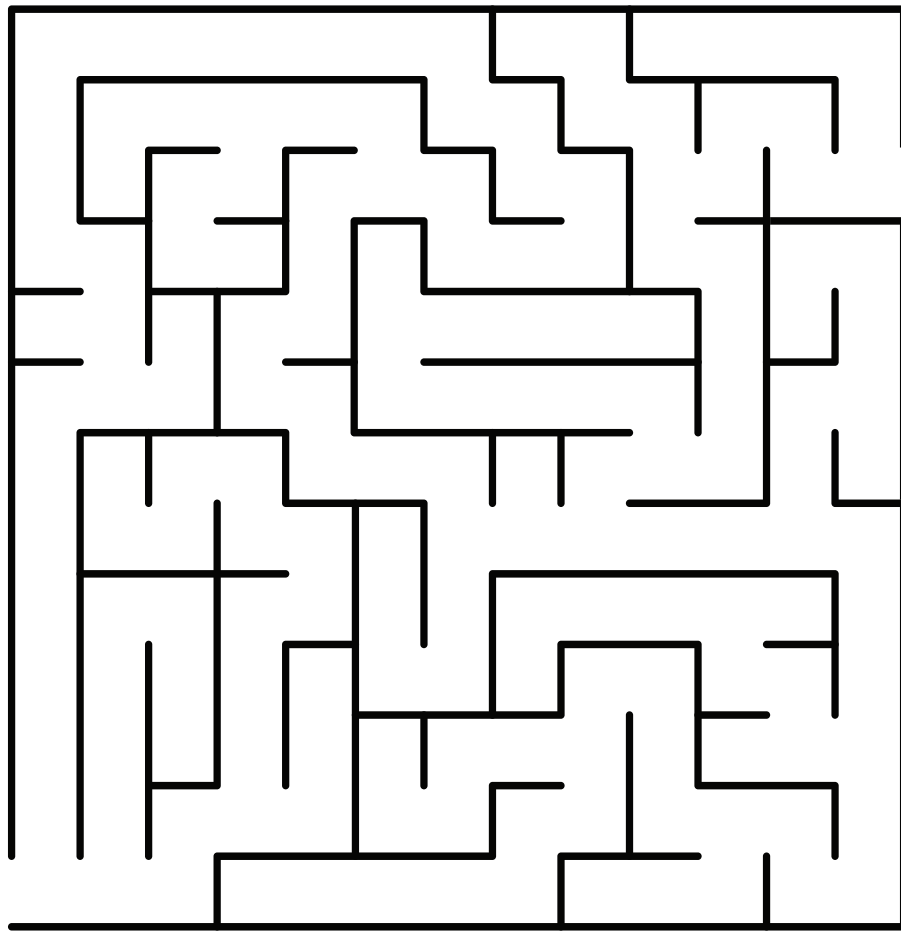
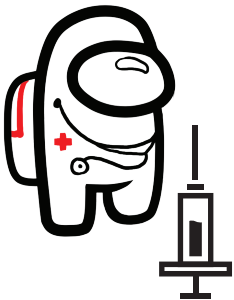


Dr. Skeld  
Polusville Center for Disease Control



# VACCINE MAZE

Help Bob the construction worker get his vaccine from Nurse Needle!



Help us eliminate one of the vaccines. We gave the vaccines to our patients and some of them experienced side effects including growing horns, releasing sparkles, dancing, and throwing up rainbows! Although the effects were temporary, we want to avoid the vaccine that causes the most inconvenience.

Vaccine #6



Vaccine #2

Vaccine #4



Vaccine #3

Vaccine #9



Vaccine #5

## VACCINE EFFICACY TRIALS

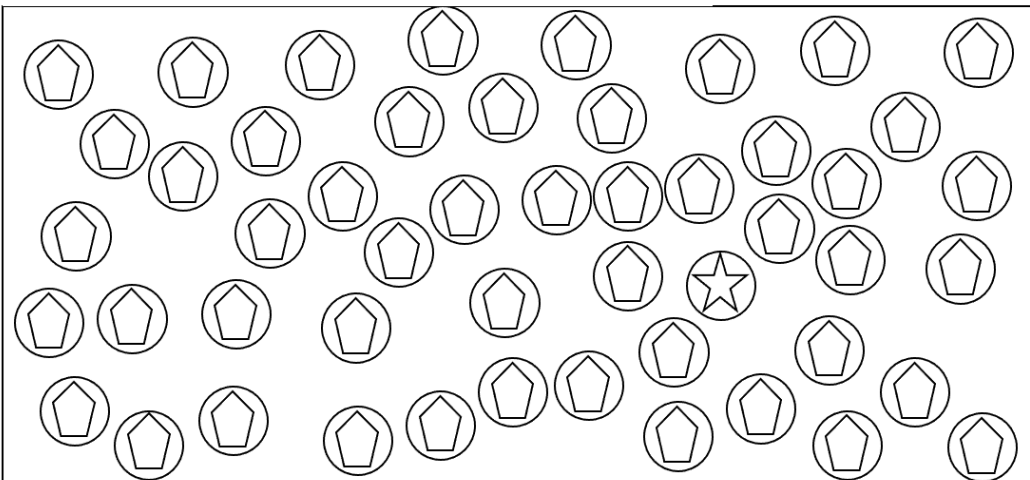
We have received data from all the vaccine companies and we need your help to decide which vaccines will work against SUS. In the report you will find the number of patients who have been given the vaccine (called the trial group) and the patients who have not received the vaccine (called the placebo group). Among these, the ones with stars developed SUS.

To calculate the vaccine efficacy follow the formula given by Dr. Skeld:

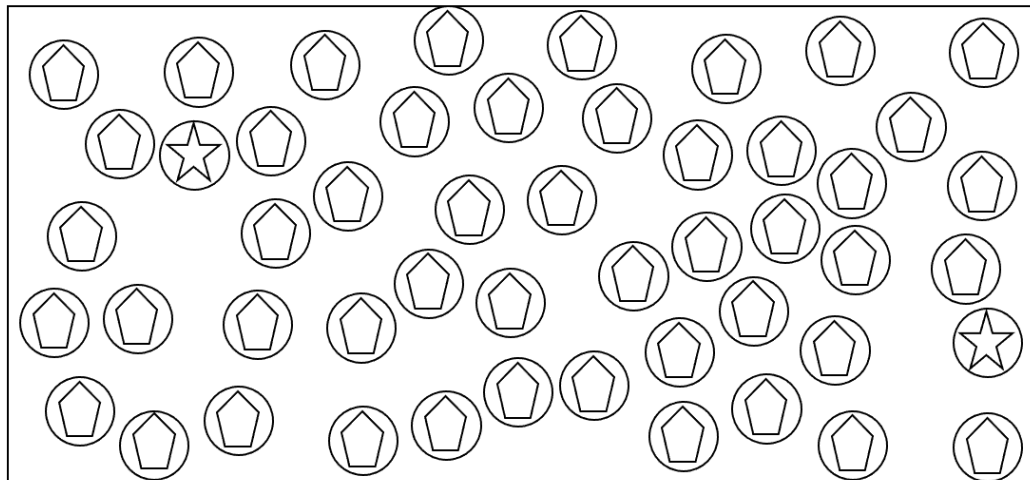
$$\left[ \frac{(\text{Number of unvaccinated patients who developed SUS} - \text{Number of vaccinated patients who developed SUS})}{\text{Number of unvaccinated patients who developed SUS}} \right] \times 100$$

Remember, we need to have at least 50 patients in each group to calculate vaccine efficacy. If you find any less, eliminate that vaccine because of incomplete data.

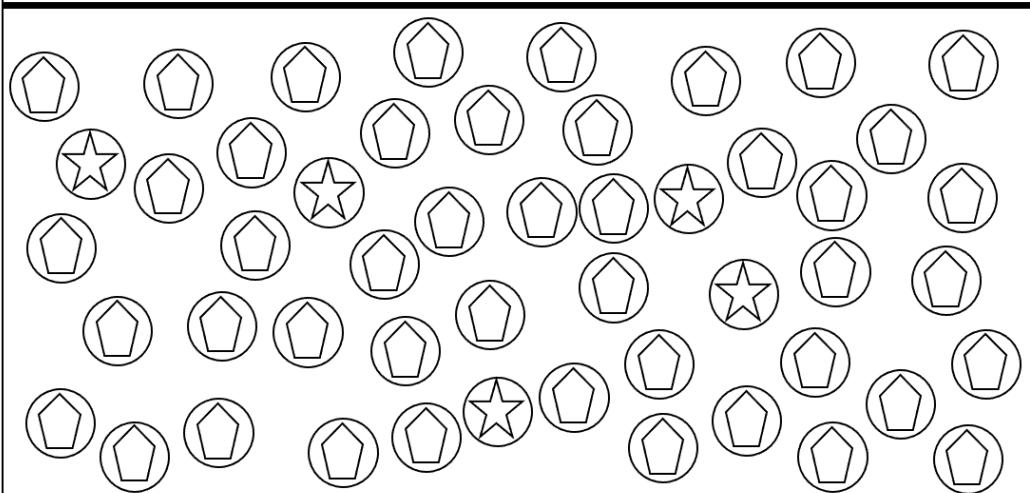
**TRIAL GROUP FOR VACCINE 2**



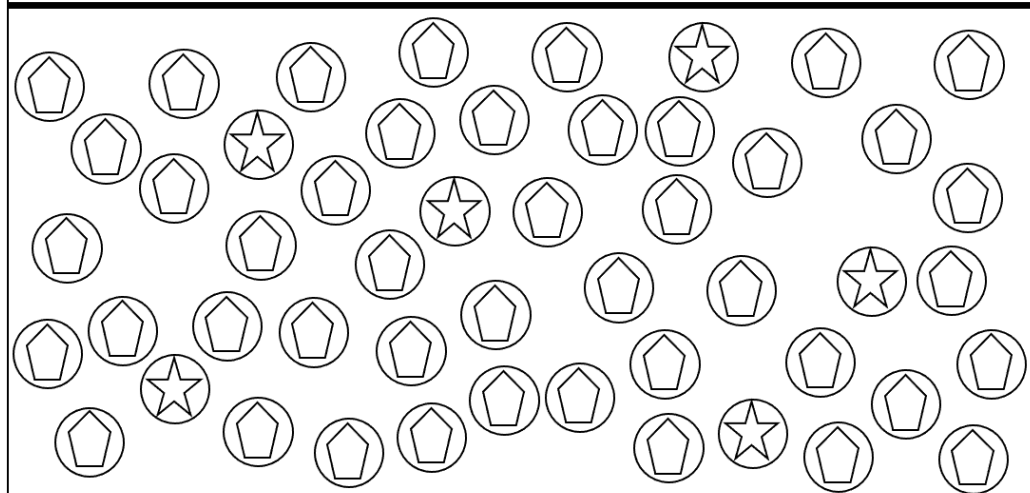
**TRIAL GROUP FOR VACCINE 3**



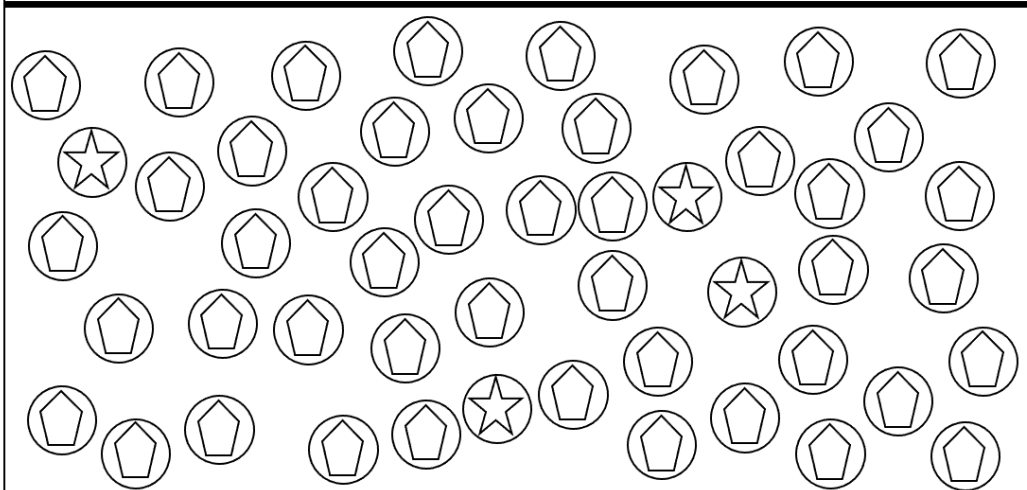
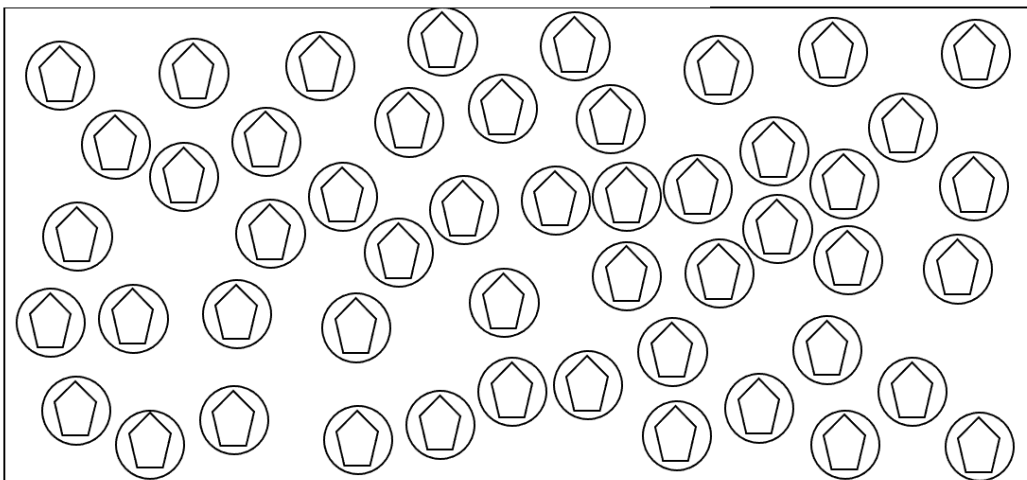
**PLACEBO GROUP FOR VACCINE 2**



**PLACEBO GROUP FOR VACCINE 3**

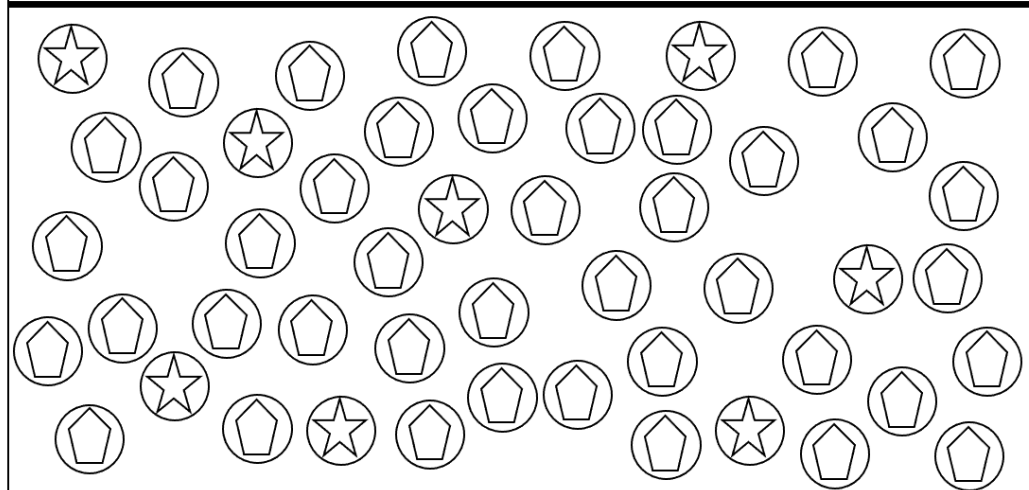
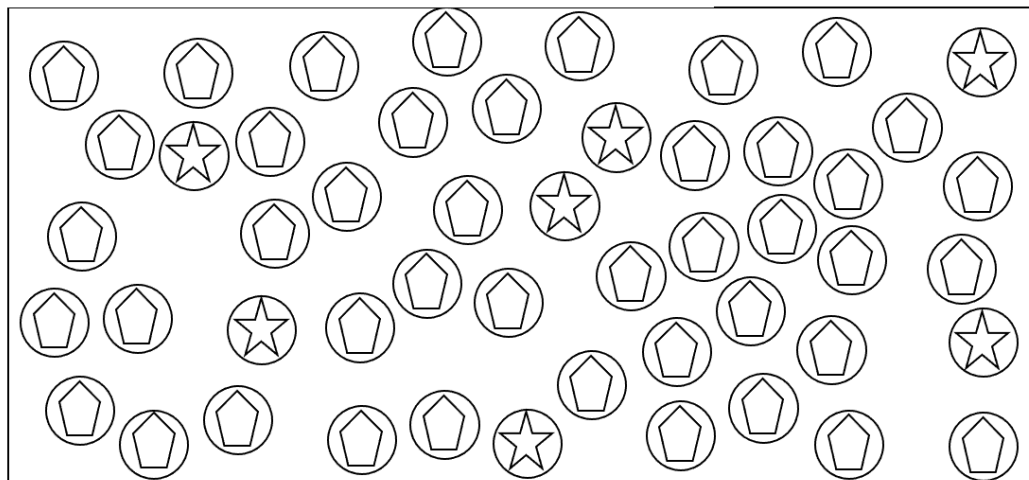


**TRIAL GROUP FOR VACCINE 6**



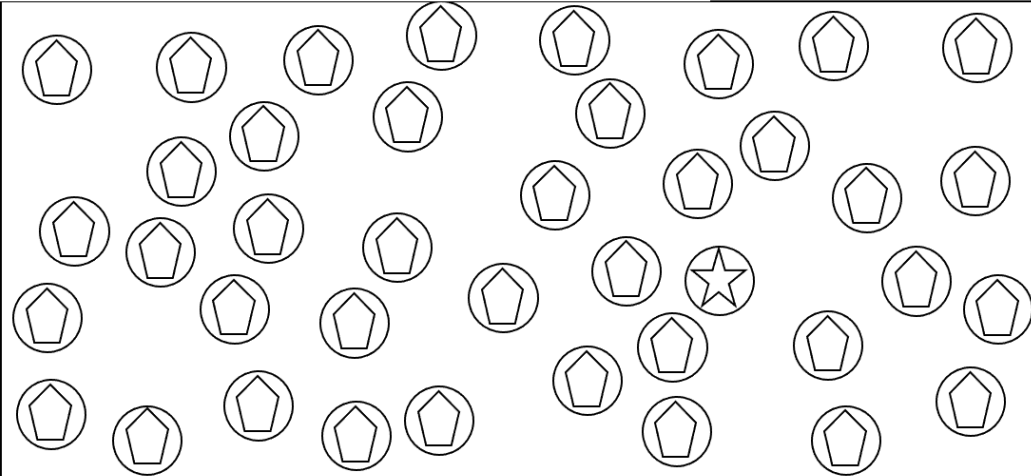
**PLACEBO GROUP FOR VACCINE 6**

**TRIAL GROUP FOR VACCINE 4**

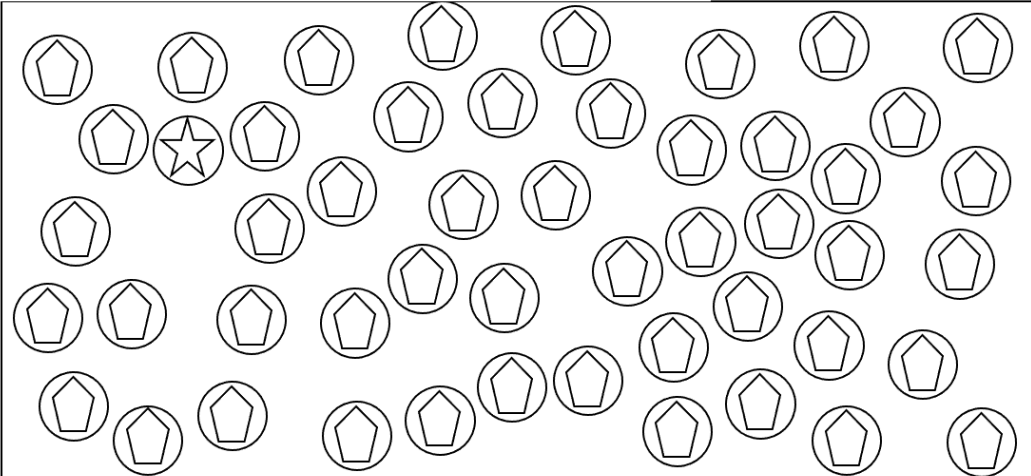


**PLACEBO GROUP FOR VACCINE 4**

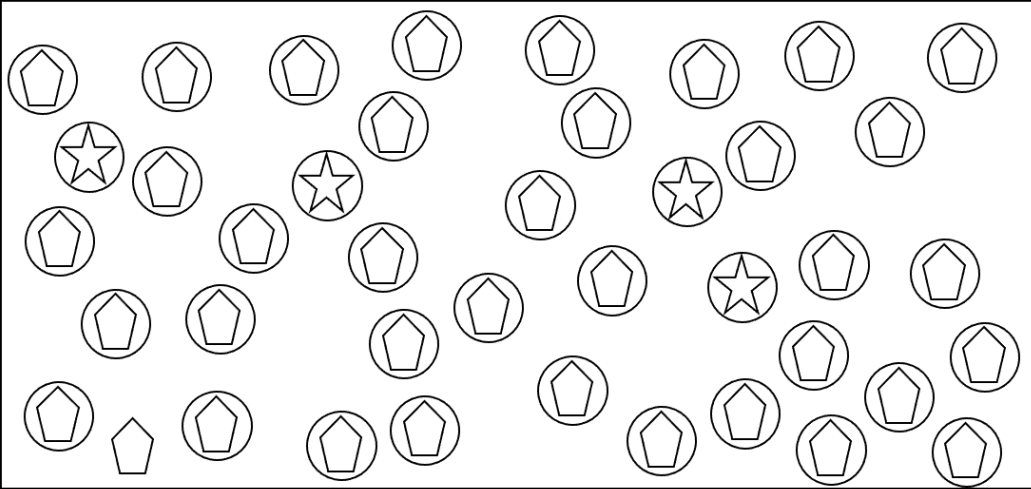
**TRIAL GROUP FOR VACCINE 5**



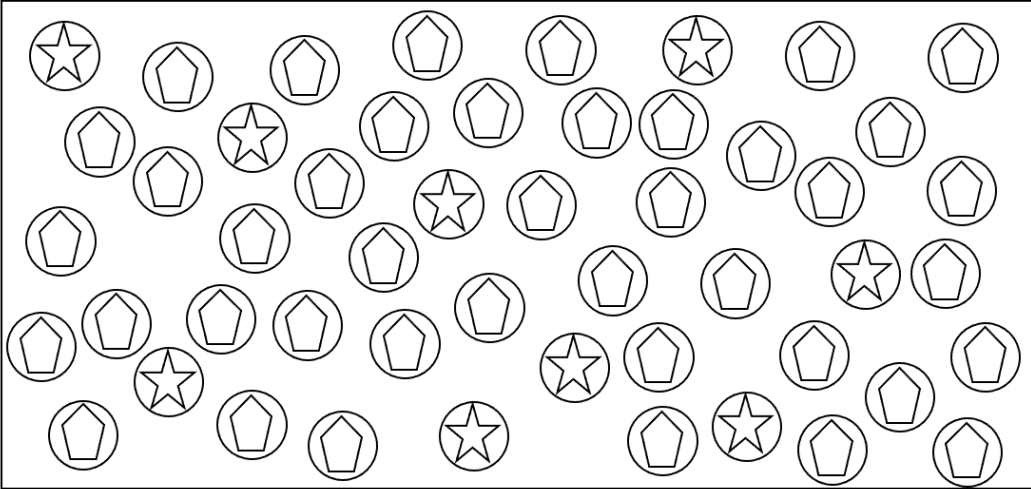
**TRIAL GROUP FOR VACCINE 9**



**PLACEBO GROUP FOR VACCINE 5**



**PLACEBO GROUP FOR VACCINE 9**





## ANSWER KEY

Vaccine efficacy:

Vaccine number	Number of vaccinated patients who developed SUS	Number of unvaccinated patients who developed SUS	Vaccine efficacy
2	1	5	80%
3	2	6	66%
6	0	4	100%
4 (was eliminated)	7	8	13%
5 (was eliminated)	Incomplete data	Incomplete data	Not calculated
9	1	9	89%

Vaccine safety: #9 is eliminated because the patient developed the most symptoms.