



Family Math Night[®] Home Edition

Welcome to Family Math Night Home Edition!
We have 4 super fun activities planned for your event.

Most of the information you need for each of the activities will be described on the video (link below). Listed on the following pages are the materials/supplies needed.

The video link will take you to our **Family Math at Home** page where you can access the PDFs.

Note: Tips for those who do not have access to a printer will be addressed in the video.

Link to Video:

<https://www.familymathnight.com/resources/mathathome.php>





Activity 3
Spinners

Materials Needed

If you do not have access to a printer, see the video for spinner board suggestions.

Link to drawing homemade circles:
<https://www.youtube.com/watch?v=-EWy6PiNXWM>

Beginning Level (K-1)

- Critical thinking questions (PDF)
- Spinner board (PDF)
- Pencil
- Paper clip

Intermediate (2-3) and Advanced (4-5) Levels

- Critical thinking questions (PDF)
- Spinner board (Intermediate and/or Advanced) (PDF)
- Pencil
- Paper clip
- Red, green, blue, and yellow crayons/markers/pencils
- Straight edge/ruler

Please watch the video for directions and to get access to the PDFs
Note: The video will give tips for those who do not have access to a printer.

Link to video:

<https://www.familymathnight.com/resources/mathathome.php>

Directions

Beginning Level (K-1)

Begin by spinning Spinner A and recording the results on the game board. After discussing the results collect data for Spinner B.

Intermediate Level (2-3)

Use a paper clip and pencil to collect data on the Design Your Own Spinner activity sheet. Then design their own spinner using the rulers and crayons.

Advanced Level (4-5)

Use a straight edge and crayons/colored pencils to design spinners following the directions on the Spinner Probabilities activity sheet. Then test out the spinners using a paper clip and pencil.

The answer to the Spinner 1 Challenge! question, simplify the fraction $\frac{2}{12}$, is $\frac{1}{6}$.

For Spinner 2, there are 12 ticked sections. $\frac{1}{3}$ of 12 is 4. So students need to color 4 sections red. The answer to the Spinner 2 Challenge! question will depend on the design of their spinner.

Background Information

The probability of an event is the number of ways the event can occur divided by the total number of possible outcomes. It's usually seen written like this:

$$P(A) = \frac{\text{The number of ways Event A can occur}}{\text{The total number of possible outcomes}}$$

On a spinner with three equal sections, one red, one blue, and one green, the probability of each color can be determined by listing the outcomes. In this case, there are 3 possible outcomes of a spin: red, blue, and green. So the probability of landing on red is 1 out of 3.

In the above example, the outcomes are equally likely to occur. But sometimes, the outcomes are not equally likely to occur. For example, on a spinner that is $\frac{1}{2}$ green, $\frac{1}{4}$ blue, and $\frac{1}{4}$ purple, green is more likely to be spun than blue or purple.

Sometimes probability is described as a fraction, as in the above scenario. Other times a decimal or a percent is used. It is easiest to change from a fraction into a decimal and, from there, into a percent.

$$\frac{1}{4} = 1 \div 4 = 0.25 = 25\%$$

Useful Vocabulary

- event** : One or more outcomes of an experiment.
- outcome** : The result of a single trial of an experiment.
- probability** : The chance that something will occur in the future.