

HOW LIKELY IS IT?

by – Heather Haney

Activity overview

The students will determine the probability of various events occurring. This activity is designed as a review assignment prior to a quiz or test. It could also be used as a classroom quiz. Students can work either independently or collaboratively on this activity.

Concepts

- *Probability & Compound Probability*
 - *Counting methods: Combinations, Permutations, Factorial & the Fundamental Counting Principle*
 - *Independent vs. dependent events*
 - *Probability Formulas*
 - *Tree Diagrams & Venn Diagrams*
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Teacher preparation

The teacher will need to transfer the How Likely Is It_ file to the Nspire handhelds and make copies of the answer documents for her or his students.

The teacher will need to have the How Likely Is It ANSWERS file on a computer or ONE Nspire handheld to display at the end.

The teacher will need to have taught the various probability concepts. Including the use of probability formulas, Venn and tree diagrams, and counting methods. This activity is designed as a review or assessment.

The teacher may want to have the probability formulas available for the students.

Classroom management tips

The teacher should monitor students during this activity and assist as needed. She or he may want to display, and work through, the first question in order to demonstrate expectations for her or his students.

TI-Nspire Applications

- *Probability—Factorial, Combinations, and Permutations*
 - *Document: How Likely Is It—(this is for the students)*
 - *Document: How Likely Is It ANSWERS—(this is for the teacher to display at the end)*
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Step-by-step directions

Distribute copies of the answer documents and an Nspire handheld to each of the students.

Instruct the students to open the *How Likely Is It* file on their Nspires.

Instruct each student to save the file under his or her own name
TOOLS

1: File

4: Save As...

student name and date

Display the first question and explain that the students are to do the work on their Nspires and record their answers on their answer documents.

Allow students to work through the problems, monitoring and assisting as needed. The teacher should instruct students as to whether they are to work independently or collaboratively.

Collect the answer documents if you wish to grade them. Otherwise, students can check over their own answers.

Instruct the students to go back to the first question on their Nspires (they should have saved their work). Display the *How Likely Is It* ANSWERS file. Show each question and **answer** for the students to check over their own answers and work.

Answer any questions. Re-teach as needed.

Activity extensions

- A similar type of activity is available for counting methods—*How Many Possibilities?* Is also on the activities exchange.

Student TI-Nspire Document

How Likely Is It

- *Separate answer document.*