

OPENING ACTIVITY:

Is it random or chaotic?

WHAT HAPPENS IN THE LONG RUN?

Is this what you expected?

Definition:

EMPIRICAL PROBABILITY

The likelihood of an event happening that is based on experience and observation rather than on theory

*As more trials are completed, the
empirical probability becomes
closer to the*
theoretical probability

THEORETICAL PROBABILITY

Probability that is determined on the basis of reasoning, not through experimentation; used when the event cannot be readily tested.

Probability =

of desired outcomes

of elements in a sample space

Sample Space:

All the possible outcomes

Can you list all the ways three coins can be flipped?

hhh

ttt

hht

tth

hth

tht

thh

htt

What about 100 coins?

Is there a faster way?