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| **Investigating Relative Frequency through Experiments** | | | |
| Lists all possible outcomes for an experiment with equally likely outcomes.  These counters are in a bag.  A group of red blue yellow and green circles  Description automatically generated  “I could get a red, green, yellow, or blue counter.” | Determines expected likelihood of an event.  A group of red blue yellow and green circles  Description automatically generated  “Red: most likely, ; green: unlikely,  or ; yellow: unlikely,   or ; blue: least likely: ” | Uses the possible outcomes of an experiment to predict the likelihood of an event.  A group of red blue yellow and green circles  Description automatically generated  “There are 12 counters and  7 are red. 12 × 4 = 48, which is close to 50. So, in 50 trials I think I will get a red counter about 7 × 4,  or 28 times.” | Conducts experiment and organizes collected data.  “I conducted the experiment.  In 50 trials, I got a red counter  35 times.” |
| **Observations/Documentation** | | | |
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| **Investigating Relative Frequency through Experiments (cont’d)** | | | |
| Uses outcomes of experiment to determine relative frequencies.  “I got a red counter 35 times  in 50 trials. So, the relative frequency of getting red  is , or , or 0.7, or 70%.” | Realizes that relative frequencies vary among sets of collected data.  “The relative frequency of getting red was different for other pairs  of students. I got , but others got , , and .” | Understands that with more trials of an experiment, the closer the actual results may be to expected likelihoods.  “When I conducted more trials,  I noticed that the results got closer to the expected likelihoods,  but they still didn’t match exactly.” | Flexibly performs experiments, analyzes results, and compares and justifies predictions.  A close up of a card  Description automatically generated  “The likelihood of drawing  a 6 or a 7 is . So, when I conduct  the experiment 60 times,  I would expect to get a 6 or 7  about 50 times. I got 6 or 7  forty-four times.  I have to do more trials.” |
| **Observations/Documentation** | | | |
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