7.SP.6: Worksheet

Solutions

1. During the 30 days in June, Brett received junk email on 27 of those days. What is the relative frequency of Brett receiving junk mail? 0.9

2. Mike drove through a particular intersection 40 times this month. Of those 40 times, he had to stop for a red light 30 times. What is the relative frequency of stopping at a red light at this intersection? 0.75

Use the following information to answer problems 3-6. Adam rolls a number cube a number of times and counts how many times he got a 1. Then, he calculates the relative frequency of getting a 1.

3. What is the theoretical probability of getting a 1 on a fair number cube? $\frac{1}{6}$ or 0.1666...

4. If Adam rolls the number cube 12 times, is he guaranteed to get a 1 exactly twice? Explain. No. We would predict that he would get a one exactly two times, but that is not certain to occur.

5. If Adam rolls the number cube 30 times, how many times should he estimate he'll get a 1? Five times

6. Which number of rolls (10, 100, or 1000) is most likely to result in a relative frequency closest to the probability of getting a 1? Explain. 1000 rolls. The more rolls we perform, the more accurate our data will be.

Use the following information to answer problems 7-10. A spinner is divided into eight equal areas, and the numbers 1 through 8 are written in the respective areas.

7. What is the probability of getting a 6 on the spinner? $\frac{1}{8}$ or 0.125

8. The spinner was spun eight times, and no 6s occurred. Does this mean that the spinner is broken or unfair? Explain. No. We would predict that one 6 would occur, but that is not certain.

9. If the spinner is spun four hundred times, what is the estimated number of times a 6 will occur? 50 times

10. If the spinner is spun a thousand times, what is the predicted relative frequency of getting a 6? 0.125