

Build Tasks – Answers



Answers

1. Because $\frac{1}{2}$ assumes the coin is fair and outcomes are equally likely

2. No; if the die is weighted, outcomes are not equally likely

3. That each counter has an equal chance of being drawn (fair/random selection)

4. When the device is fair, balanced, and the experiment is random

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5. No; 8 in 20 is 40%, close to 50%, so a fair die could produce this by chance

6. With replacement, the conditions stay the same each draw; without replacement, drawing changes the bag contents

7. No; 51 in 100 is 51%, very close to 50%, well within normal variation

8. Large samples average out random variation; small samples can vary widely by chance

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9. The actual probability or frequency of each outcome

10. That the device is fair, outcomes are equally likely, and the process is truly random

11. Wear, scratches, or slight imbalance that favour one side

12. Spin it many times, record results, and check if frequencies are roughly equal