

Compare experimental with theoretical probability

NAME	DATE	SCORE / 10
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1 A fair number cube shows 6 in 7 of 24 rolls. The model predicts 4 sixes. Why can the result differ from the model?

- ☐ The model must be wrong ☐ With few trials, results vary by chance
☐ The next few trials will make up for it ☐ The number cube must be unfair

2 A fair number cube shows 6 in 2 of 18 rolls. Over 1000 rolls, what happens to the fraction of sixes?

- ☐ It will most likely get closer to $\frac{1}{6}$ ☐ It will move further from $\frac{1}{6}$
☐ It will become exactly $\frac{1}{6}$ ☐ It will stay the same

3 The chance of red on a spinner is $\frac{1}{4}$. Which number of spins is more likely to give a fraction of reds close to $\frac{1}{4}$?

- ☐ Both are equally likely ☐ 12 spins ☐ 1000 spins

4 The chance of heads on a fair coin is $\frac{1}{2}$. Which number of flips is more likely to give a fraction of heads close to $\frac{1}{2}$?

- ☐ 1000 flips ☐ 10 flips ☐ Both are equally likely

5 The chance of a 6 on a fair cube is $\frac{1}{6}$. Which number of rolls is more likely to give a fraction of sixes close to $\frac{1}{6}$?

- ☐ Both are equally likely ☐ 1000 rolls ☐ 12 rolls

6 A fair coin lands heads in 2 of 10 flips. The model predicts 5 heads. Why can the result differ from the model?

- ☐ The model must be wrong ☐ The next few trials will make up for it
☐ With few trials, results vary by chance ☐ The coin must be unfair
-

7 A fair coin lands heads in 3 of 12 flips. Over 1000 flips, what happens to the fraction of heads?

- ☐ It will stay the same ☐ It will become exactly $\frac{1}{2}$ ☐ It will most likely get closer to $\frac{1}{2}$
☐ It will move further from $\frac{1}{2}$
-

8 A spinner is $\frac{1}{4}$ red. It lands on red in 5 of 12 spins. Over 1000 spins, what happens to the fraction of reds?

- ☐ It will become exactly $\frac{1}{4}$ ☐ It will most likely get closer to $\frac{1}{4}$ ☐ It will stay the same
☐ It will move further from $\frac{1}{4}$
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9 A spinner is $\frac{1}{4}$ red. It lands on red in 7 of 20 spins. The model predicts 5 reds. Why can the result differ from the model?

- ☐ The spinner must be unfair ☐ The model must be wrong
☐ With few trials, results vary by chance ☐ The next few trials will make up for it
-

10 A fair number cube shows 6 in 5 of 18 rolls. The model predicts 3 sixes. Why can the result differ from the model?

- ☐ With few trials, results vary by chance ☐ The number cube must be unfair
☐ The next few trials will make up for it ☐ The model must be wrong

Compare experimental with theoretical probability

1 With few trials, results vary by chance

3 1000 spins

5 1000 rolls

7 It will most likely get closer to $1/2$

9 With few trials, results vary by chance

2 It will most likely get closer to $1/6$

4 1000 flips

6 With few trials, results vary by chance

8 It will most likely get closer to $1/4$

10 With few trials, results vary by chance