



GRADE 7 · STATISTICS & PROBABILITY · HOMEWORK

PROBABILITY FROM EXPERIMENTAL DATA

Today's goal: I can predict the approximate relative frequency given the probability and understand that more trials of a chance experiment will increase the accuracy of the probability estimate.



Pick your peppers!

Everyone does Mild & Medium. Then climb as high as you can.



Mild

Tan the Turtle



Medium

Digit the Fox



Spicy

Blaze the Dragon

WATCH MR DJ SOLVE

30 spins give 9 reds. Find the relative frequency.

1 $\frac{9}{30} = \frac{3}{10}$

Answer: $\frac{3}{10}$



REMEMBER

Relative frequency is observed; probability is predicted. They rarely match exactly, and the gap tends to shrink with more trials. Predicted count = probability × trials. Each trial is independent of the last.



FAMILY CORNER

No need to remember this math yourself! Ask your student to teach you Mr DJ's example, then try the first Mild problem together.



MILD

Tan the Turtle: Slow and steady. Warm up!

1 80 spins give 22 reds. Find the relative frequency.

Answer:



OOPS ALERT

Careful on #1! The slip Mr DJ sees most: Answered 22.



MEDIUM

Digit the Fox: Stretch your brain.

- 2 How far is your answer to question 1 from $\frac{1}{3}$?

Answer

- 3 How many reds would you predict in 80 spins? Compare with the 22 observed.

Answer

- 4 How many reds would you predict in 600 spins?

Answer

- 5 A fair coin is flipped 10 times and lands heads 7 times. Find the relative frequency and its distance from $\frac{1}{2}$.

Answer



SPICY

Blaze the Dragon: Bring the heat!

- 6 Does 7 heads in 10 flips show the coin is biased? Explain what you would do to find out.

Answer

- 7 Explain the difference between “more trials make the estimate better” and “more trials make the next outcome more predictable”.

Answer



How did this sheet feel?

☐ Easy for me ☐ Just right ☐ Made me think

Stuck? Watch Mr DJ explain it

Step-by-step video lessons on YouTube: [youtube.com/@MathWithMrDJ](https://www.youtube.com/@MathWithMrDJ)

Brain break: daily puzzles

Three new math puzzles every day, free: puzzles.mathwithmrdj.com