

# Why Did the King's Birthday Celebration Last So Long?



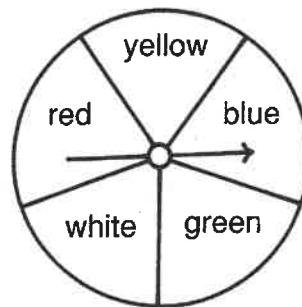
Do each exercise and find your answer in the Code Key. Notice the letter under it. Write this letter in the box containing the exercise number.

Code Key	$\frac{1}{100}$	$\frac{1}{5}$	$\frac{2}{5}$	$\frac{3}{5}$	$\frac{4}{5}$	1	$\frac{4}{13}$	$\frac{5}{13}$	$\frac{2}{7}$	$\frac{1}{8}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{7}{8}$
	R	T	S	N	I	K	P	E	W	Y	H	A	L	G

Do the Puzzle

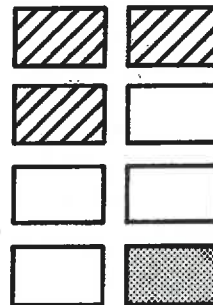
I. Find each probability if you spin the spinner once.

- ①  $P(\text{red}) = \frac{1}{5}$  ②  $P(\text{green})$
- ③  $P(\text{blue or white})$  ④  $P(\text{not yellow})$
- ⑤  $P(\text{not red})$  ⑥  $P(\text{blue or red or yellow})$



II. Find each probability if you choose one card at random.

- ⑦  $P(\text{striped})$  ⑧  $P(\text{white})$
- ⑨  $P(\text{shaded})$  ⑩  $P(\text{white or shaded})$
- ⑪  $P(\text{striped or white})$  ⑫  $P(\text{striped or shaded})$
- ⑬  $P(\text{not striped})$  ⑭  $P(\text{not white})$
- ⑮  $P(\text{striped or white or shaded})$



III. Solve.

- ⑯ What is the probability of guessing the correct answer to a multiple choice question if there are 5 choices? ⑰ What is the probability of guessing the correct answer to a true-false question?
- ⑱ What is the probability that your birthday will fall on Saturday or Sunday? ⑲ What is the probability of winning a raffle if 500 tickets are sold and you buy 5 of them?
- ⑳ A class of 25 students has 15 girls and 10 boys. If one student is chosen at random, what is the probability it is a girl? ㉑ There are 26 letters in the alphabet. What is the probability that a letter chosen at random is in the word MATHEMATICS?

5	T	18	8	3	14	6	17	13	10	15	20	4	11	7	16	T	21	12	19	2	9
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# When the Boy Tire Maker Married the Girl Tire Maker, What Did Everyone Say?

Do each exercise and find your answer at the bottom of the page. Write the letter of the exercise in the box above the answer.

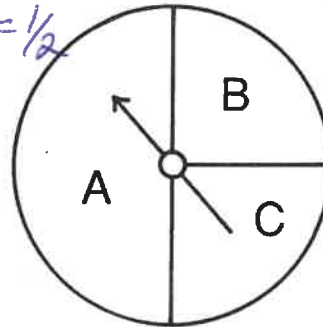
1. Suppose you roll a regular 6-faced die:



- (A) How many equally likely outcomes are there?
- (E) If you roll the die once, what is the probability of rolling a 3?
- (H) If you roll the die 60 times, about how many times would you expect to get a 1?
- (I) If you roll the die 300 times, about how many times would you expect to get a 5?

*Do the puzzle*

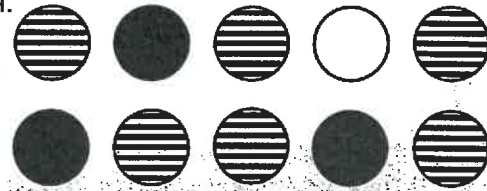
2. A spinner is shown at the right for which each outcome is **not** equally likely.



- (E) If you spin the spinner once, what is the probability that it will stop on A?  *$P(A) = \frac{2}{4} = \frac{1}{2}$*
- (A) If you spin the spinner once, what is the probability that it will stop on B?
- (T) If you spin the spinner 50 times, about how many times would you expect it to stop on A?
- (Y) If you spin the spinner 80 times, about how many times would you expect it to stop on C?

*Careful!!!*

3. Find each probability if you choose one marble at random.



- (E) P(black)
- (S) P(striped)
- (A) P(not black)
- (E) P(not white)
- (R) P(black or white)
- (M) P(yellow)

4. Solve.

- (N) If you flip a coin 150 times, about how many times would you expect to get heads?
- (K) If you randomly pick a date in April, how many equally likely outcomes are there?
- (C) The letters *a, e, i, o, u*, and *y* are vowels. If one letter of the alphabet is chosen at random, what is the probability it is a vowel?
- (P) A magician asks you to pick a card, any card, from a standard deck of 52 cards. What is the probability of picking an ace?

25	10	$\frac{9}{10}$	20	$\frac{1}{8}$	0	6	30	$\frac{1}{2}$	$\frac{2}{13}$	$\frac{7}{10}$	$\frac{1}{5}$	75	50	$\frac{3}{13}$	$\frac{1}{6}$	32	$\frac{3}{5}$	$\frac{1}{13}$	$\frac{1}{4}$	$\frac{2}{5}$	$\frac{3}{10}$
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