

LESSON **Puzzles, Twisters & Teasers**
10-5 *Declare Your Independence!*

Decide whether the events are dependent or independent.
 Circle the letter above your answer. Unscramble the letters to
 answer the riddle.

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|--|----------|-------------|--|
| 1. tossing a coin twice | Q | I | 6. drawing names out of a hat <i>without replacement</i> |
| dependent | | independent | R |
| | | | dependent |
| 2. pulling two socks from a drawer
at the same time | E | P | B |
| dependent | | independent | dependent |
| | | | independent |
| 3. drawing two marbles out of a bag | B | D | 7. throwing a pair of number cubes
ten times |
| dependent | | independent | X |
| | | | dependent |
| 4. spinning a spinner five times | M | C | U |
| dependent | | independent | dependent |
| | | | independent |
| 5. spinning two different spinners two
times | K | E | 8. throwing one number cube five times |
| dependent | | independent | G |
| | | | dependent |
| | | | independent |
| | | | 9. picking cards from a deck |
| | | | A |
| | | | dependent |
| | | | independent |
| | | | 10. throwing three coins three times |
| | | | R |
| | | | dependent |
| | | | independent |



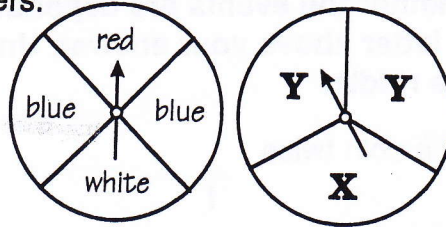
What do penguins eat for lunch?

What Did Blackbeard Say to His Pirates?

Do each exercise and find your answer in the Code Key. Write the letter of the answer in the box containing the number of the exercise.

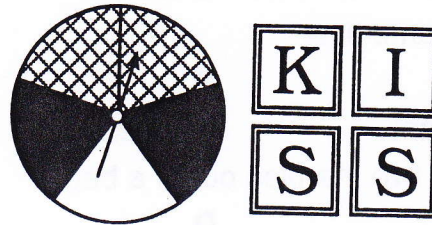
A. Find each probability if you spin both spinners.

1. $P(\text{red, X})$
2. $P(\text{white, Y})$
3. $P(\text{blue, X})$
4. $P(\text{blue, Y})$
5. $P(\text{not red, X})$
6. $P(\text{not red, Y})$



B. Find each probability if you spin the spinner and pick a card.

7. $P(\text{white, K})$
8. $P(\text{white, S})$
9. $P(\text{black, K})$
10. $P(\text{black, S})$
11. $P(\text{not black, K})$
12. $P(\text{not black, S})$
13. $P(\text{not white, K})$
14. $P(\text{not white, S})$



C. Mr. and Mrs. Quagmire have decided to have a family.

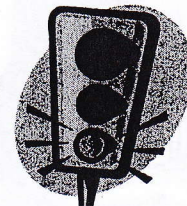
15. If they have one child, what is the probability that it is a boy?
16. If they have two children, what is the probability that both are boys?
17. If they have three children, what is the probability that all 3 are boys?
18. If they have four children, what is the probability that all 4 are boys?

D. A test has several multiple choice questions, each with 5 choices.

19. If you guess on one question, what is the probability of getting it correct?
20. If you guess on 2 questions, what is the probability of getting both correct?
21. If you guess on 3 questions, what is the probability of getting all 3 correct?
22. If you guess on 4 questions, what is the probability of getting all 4 correct?

E. Solve.

23. Dr. Sox drives through five stoplights on her way to work. Each of the stoplights is green half the time. When Dr. Sox drives to work today, what is the probability she will hit five green lights?



24. The police are looking for a man who wears size 12 shoes and drives a black car. They estimate that 1 in 10 men wears size 12 shoes, and that 1 in 8 men drives a black car. If one man is chosen at random, what is the probability that he matches the description?

Code Key

$\frac{1}{2}$ I

$\frac{1}{3}$ H

$\frac{1}{4}$ W

$\frac{1}{5}$ T

$\frac{1}{6}$ O

$\frac{1}{8}$ U

$\frac{1}{10}$ E

$\frac{1}{12}$ S

$\frac{1}{16}$ Y

$\frac{1}{20}$ A

$\frac{1}{25}$ Z

$\frac{1}{32}$ G

$\frac{1}{80}$ S

$\frac{1}{125}$ A

$\frac{1}{625}$ H

$\frac{2}{5}$ U

$\frac{3}{10}$ E

$\frac{3}{20}$ Y

16	4	21	10	18	2	14	24	8	6	20	12	15	1	5	22	7	19	11	3	17	23	9	13
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