GRADE12 APPLIED
UNIT A – PROBABILITY
DEPENDENT AND INDEPENDENT EVENTS

Name: _____
Date: _____

SHOW WORK IN WORKSPACE PROVIDED; DO THE PUZZLE!

P(A and B) = P(A) * P(B)

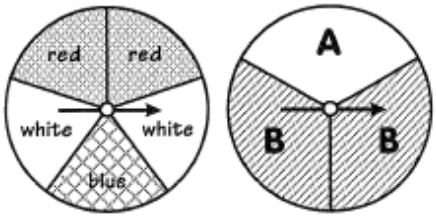
INDEPENDENT EVENTS (the one does not affect the other)

Why Did the Actor Jump Out Of a Window In Times Square?

Find each answer in the set of answers under the exercise. Write the exercise letter in that box.

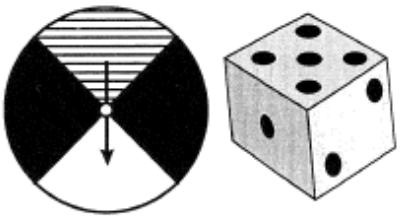
1 **Find each probability if you spin both spinners.**

T. P(blue, A)
A. P(not red, A)
E. P(red, A)
E. P(not white, B)
O. P(white, B)
D. P(not blue, B)



2 **Find each probability if you spin the spinner and roll the die.**

A. P(white, 2)
T. P(striped, less than 5)
H. P(black, 6)
K. P(not striped, odd)
E. P(white, even)
W. P(green, odd)



3 **Solve.**

M. Suppose the probability that a new spark plug is defective is $\frac{1}{24}$. And suppose you buy two new spark plugs for a motorcycle. What is the probability that both of them are defective?

N. A test includes several multiple choice questions, each with five choices. Suppose you don't know the answers for three of these questions, so you guess. What is the probability of getting all three correct?

$\frac{1}{12}$	$\frac{2}{15}$	$\frac{1}{496}$	0	$\frac{1}{5}$	$\frac{1}{125}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{8}{15}$	$\frac{1}{75}$	$\frac{1}{6}$	$\frac{4}{15}$	$\frac{5}{8}$	$\frac{1}{576}$	$\frac{1}{24}$	$\frac{3}{8}$	$\frac{2}{5}$

WORKSPACE:

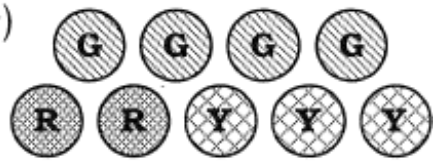
DEPENDENT (the first event affects the second event)
P(A then B) = P(A) * P(B | A)

4 **"ARKANSAS": Find each probability if you pick a card, do NOT replace it, then pick a second card.**

O. P(N, then K)
A. P(R, then S)
I. P(A, then N)
B. P(S, then A)
Y. P(S, then not S)
A. P(A, then not A)

5 **Find each probability if you pick two marbles without replacing the first (G = green; R = red; Y = yellow).**

O. P(red, then green)
A. P(red, then yellow)
W. P(green, then green)
N. P(yellow, then not yellow)
T. P(green, then not green)
D. P(not red, then not red)



6 **Solve.**

H. Two students are chosen at random from a class of 30. What is the probability that both you and your best friend are chosen?

R. Two cards are drawn at random from a standard deck of 52 cards. What is the probability that both cards are aces?

$\frac{1}{12}$	$\frac{7}{18}$	$\frac{1}{435}$	$\frac{3}{56}$	$\frac{5}{18}$	$\frac{2}{869}$	$\frac{1}{56}$	$\frac{1}{4}$	$\frac{3}{220}$	$\frac{3}{28}$	$\frac{1}{221}$	$\frac{1}{9}$	$\frac{15}{56}$	$\frac{7}{12}$	$\frac{1}{6}$	$\frac{1}{28}$	$\frac{3}{14}$

WORKSPACE: