Name: Answer Key Period: _____

Independent and Dependent Probability Stations

Station 1

1. Circle the appropriate answer for each card.

Card 1:	INDEPENDENT	OR	**DEPENDENT**
Card 2:	**INDEPENDENT**	OR	DEPENDENT
Card 3:	INDEPENDENT	OR	**DEPENDENT**
Card 4:	INDEPENDENT	OR	**DEPENDENT**
Card 5:	INDEPENDENT	OR	**DEPENDENT**
Card 6:	**INDEPENDENT**	OR	DEPENDENT
Card 7:	**INDEPENDENT**	OR	DEPENDENT
Card 8:	INDEPENDENT	OR	**DEPENDENT**
Card 9:	**INDEPENDENT**	OR	DEPENDENT
Card 10:	INDEPENDENT	OR	**DEPENDENT**
Card 11:	**INDEPENDENT**	OR	DEPENDENT
Card 12:	INDEPENDENT	OR	**DEPENDENT**
Card 13:	**INDEPENDENT**	OR	DEPENDENT
Card 14:	INDEPENDENT	OR	**DEPENDENT**
Card 15:	INDEPENDENT	OR	**DEPENDENT**
Card 16:	INDEPENDENT	OR	**DEPENDENT**

2. What makes independent and dependent probability different? Independent events have no effect on each other. Dependent events affect the probability of the events.

Station 2

1. Does the left column represent independent or dependent probability? independent
2. Does the right column represent independent or dependent probability? dependent

a) Red candy twice (replaced)

$\frac{3}{12} \cdot \frac{3}{12} = \frac{1}{16}$

b) Yellow candy then a green candy (replaced)

$\frac{2}{12} \cdot \frac{2}{12} = \frac{1}{36}$

c) Blue candy twice (replaced)

$\frac{5}{12} \cdot \frac{5}{12} = \frac{25}{144}$

d) Green candy followed by a blue candy (replaced)

$\frac{2}{12} \cdot \frac{5}{12} = \frac{5}{72}$

e) Red candy twice (not replaced)

$\frac{3}{12} \cdot \frac{2}{11} = \frac{1}{22}$

f) Yellow candy then a green candy (not replaced)

$\frac{2}{12} \cdot \frac{2}{11} = \frac{1}{33}$

g) Blue candy twice (not replaced)

$\frac{5}{12} \cdot \frac{4}{11} = \frac{5}{33}$

h) Green candy followed by a blue candy (not replaced)

$\frac{2}{12} \cdot \frac{5}{11} = \frac{10}{132} = \frac{5}{66}$

Station 3

P(apple, cherry)	P(cherry, mystery)	P(not cherry, mystery)	P(cherry, not cherry)
$\frac{2}{12} \cdot \frac{4}{12}$ $\frac{1}{18}$	$\frac{4}{12} \cdot \frac{6}{12} =$ $\frac{1}{6}$	$\frac{8}{12} \cdot \frac{6}{12} =$ $\frac{1}{3}$	$\frac{4}{12} \cdot \frac{8}{12} =$ $\frac{2}{9}$
P(apple, mystery)	P(mystery, mystery)	P(apple, not mystery)	P(not apple, not apple)
$\frac{2}{12} \cdot \frac{6}{12} =$ $\frac{1}{12}$	$\frac{6}{12} \cdot \frac{6}{12} =$ $\frac{1}{4}$	$\frac{2}{12} \cdot \frac{6}{12} =$ $\frac{1}{12}$	$\frac{10}{12} \cdot \frac{10}{12} =$ $\frac{25}{36}$

1. Do these problems represent independent or dependent probability? Independent

Station 4

P(M, M)	P(C, S)	P(T, H)	P(A, M)
$\frac{2}{11} \cdot \frac{1}{10} = \frac{1}{55}$	$\frac{1}{11} \cdot \frac{1}{10} = \frac{1}{110}$	$\frac{2}{11} \cdot \frac{1}{10} = \frac{1}{55}$	$\frac{2}{11} \cdot \frac{2}{10} = \frac{2}{55}$
P(E, R)	P(A, not H)	P(I, M, S)	P(T, S, not A)
$\frac{1}{11} \cdot \frac{0}{10} =$ 0%	$\frac{2}{11} \cdot \frac{9}{10} = \frac{9}{55}$	$\frac{1}{11} \cdot \frac{2}{10} \cdot \frac{1}{9} =$ $\frac{1}{495}$	$\frac{2}{11} \cdot \frac{1}{10} \cdot \frac{7}{9} =$ $\frac{7}{495}$

1. Do these problems represent independent or dependent probability? Dependent