

DATE: \_\_\_/\_\_\_/\_\_\_

NAME: Key**MATH-7 CLASSWORK/ WARM-UP****"COMPOUND PROBABILITY"**

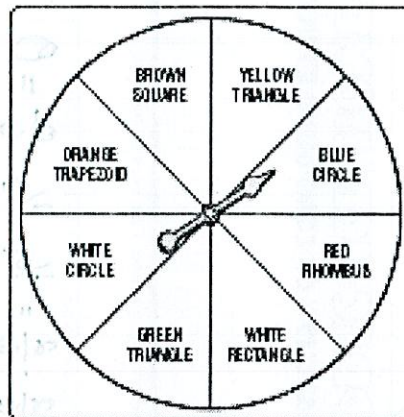
A number cube is rolled and the spinner is spun.  
Find each probability.

1.  $P(2 \text{ and green triangle}) = \frac{1}{6} \cdot \frac{1}{8} =$

2.  $P(\text{an odd number and a circle}) = \frac{3}{6} \cdot \frac{2}{8} =$

3.  $P(\text{a prime number and a quadrilateral}) = \frac{4}{6} \cdot \frac{4}{8} =$

4.  $P(\text{a number greater than 4 and a parallelogram}) = \frac{2}{6} \cdot \frac{0}{6} =$



ANSWER SPACE (Place answers to questions 1-4 in the table below):

1. $\frac{1}{48}$	2. $\frac{6}{48} = \frac{1}{8}$	3. $\frac{16}{48} = \frac{1}{3}$	4. $\frac{0}{6} = 0$
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There are 5 yellow marbles, 1 purple marble, 3 green marbles, and 3 red marbles in a bag. Once a marble is drawn, it is replaced. Find the probability of each outcome.

5. a purple then a red marble

$\frac{1}{12} \cdot \frac{3}{12} = \frac{3}{144} = \frac{1}{48}$

7. two green marbles in a row

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

9. a purple then a green marble

$\frac{1}{12} \cdot \frac{3}{12} = \frac{1}{48}$

6. a red then a green marble

$\frac{3}{12} \cdot \frac{3}{12} = \frac{9}{144} = \frac{1}{16}$

8. two red marbles in a row

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

10. a red then a yellow marble

$\frac{3}{12} \cdot \frac{5}{12} = \frac{5}{48}$

ANSWER SPACE (Place answers to questions 5-10 in the table below):

5. $\frac{1}{48}$	6. $\frac{1}{16}$	7. $\frac{1}{16}$
8. $\frac{1}{16}$	9. $\frac{1}{48}$	10. $\frac{5}{48}$

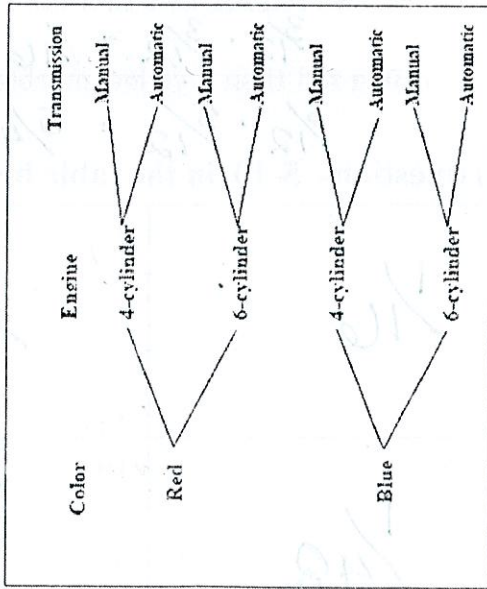
NAME: \_\_\_\_\_

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# MATH-7 PRACTICE/HOMEWORK

## "PROBABILITY OF COMPOUND EVENTS"

An automobile dealer has cars available with the combinations of colors, engines, and transmissions indicated in the following tree diagram. A selection is made at random.



*Key*

NAME: \_\_\_\_\_

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# MATH-7 PRACTICE/HOMEWORK

## "PROBABILITY OF COMPOUND EVENTS"



*What's a duck's sure*

You roll a red and yellow number cube. Find each probability:

M. P(red & yellow > 3) $\frac{1}{6} \cdot \frac{1}{6} = \frac{1}{36}$	A. P(red < 3, yellow > 3) $\frac{2}{6} \cdot \frac{2}{6} = \frac{1}{9}$	H. P(red = 1, yellow = 1) $\frac{1}{6} \cdot \frac{1}{6} = 0$	N. P(red = 2, yellow = 2 or 3) $\frac{1}{6} \cdot \frac{2}{6} = \frac{2}{36} = \frac{1}{18}$
S. P(red even, yellow < 3) $\frac{3}{6} \cdot \frac{1}{6} = \frac{1}{12}$	L. P(red < 5, yellow < 5) $\frac{4}{6} \cdot \frac{4}{6} = \frac{2}{3}$	I. P(red < 7, yellow < 7) 1	C. P(red even, yellow odd) $\frac{3}{6} \cdot \frac{3}{6} = \frac{1}{4}$

Ms. Clark's Party

You have two bags. One contains the digits 1-9 and the other has 1 of each vowel (A, E, I, O, U). You select one from each bag. Find each probability:

T. P(2, U) $\frac{1}{9} \cdot \frac{1}{5} = \frac{1}{45}$	D. P(6, Not A or E) $\frac{1}{9} \cdot \frac{3}{5} = \frac{1}{15}$	E. P(even, I) $\frac{4}{9} \cdot \frac{1}{5} = \frac{4}{45}$	R. P(odd, O or U) $\frac{5}{9} \cdot \frac{2}{5} = \frac{2}{9}$
O. P(number < 4, A or I) $\frac{3}{9} \cdot \frac{2}{5} = \frac{2}{15}$	Q. P(number > 3, Not V) $\frac{6}{9} \cdot 1 = \frac{2}{3}$	F. P(multiple of 2, A or I) $\frac{4}{9} \cdot \frac{2}{5} = \frac{8}{45}$	K. P(number < 9, E or U) $\frac{8}{9} \cdot \frac{2}{5} = \frac{16}{45}$

Favorite Stack:

1	0	$\frac{1}{45}$	$\frac{1}{45}$	$\frac{1}{12}$	$\frac{1}{45}$	$\frac{1}{15}$	$\frac{1}{15}$	$\frac{1}{45}$	$\frac{1}{45}$	$\frac{1}{12}$
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Favorite T.V. shows:

1	8	1	16	8	1	4	1	1	1	2	1	4	1
15	45	4	45	45	36	45	18	45	18	45	6	9	45

Favorite movie:

1	2	8	1	1	1	8	1	16	8	4	1
4	15	45	18	45	15	45	4	45	45	9	6

- What is the probability of selecting a car with manual transmission?  
 $\frac{1}{2}$
- What is the probability of selecting a blue car with manual transmission?  
 $\frac{2}{8} = \frac{1}{4}$
- What is the probability of selecting a car with a 4-cylinder engine and a manual transmission?  
 $\frac{2}{8} = \frac{1}{4}$
- What is the probability of selecting a blue car with a 6-cylinder engine and an automatic transmission?  
 $\frac{1}{8}$