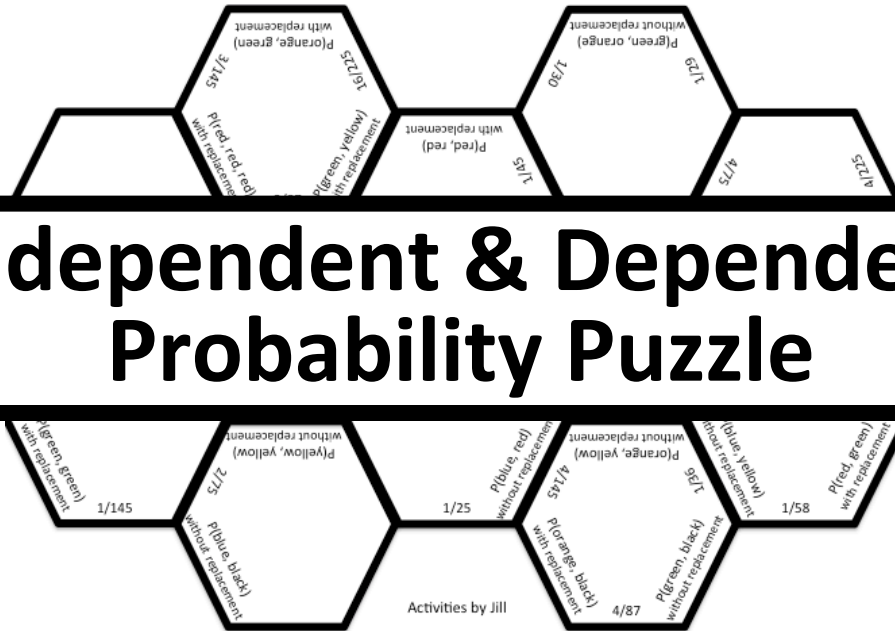


# Independent & Dependent Probability Puzzle



## **Teacher Tip**

**Try using marbles in the indicated colors and  
have students act out the problems.**

**Don't have marbles?**

**Use colored slips of paper to represent them.**

# Independent & Dependent Probability Puzzle

Name \_\_\_\_\_

A jar contains 4 blue, 6 red, 5 orange, 3 yellow, 4 black, 8 green marbles. Find each probability and show your work below.

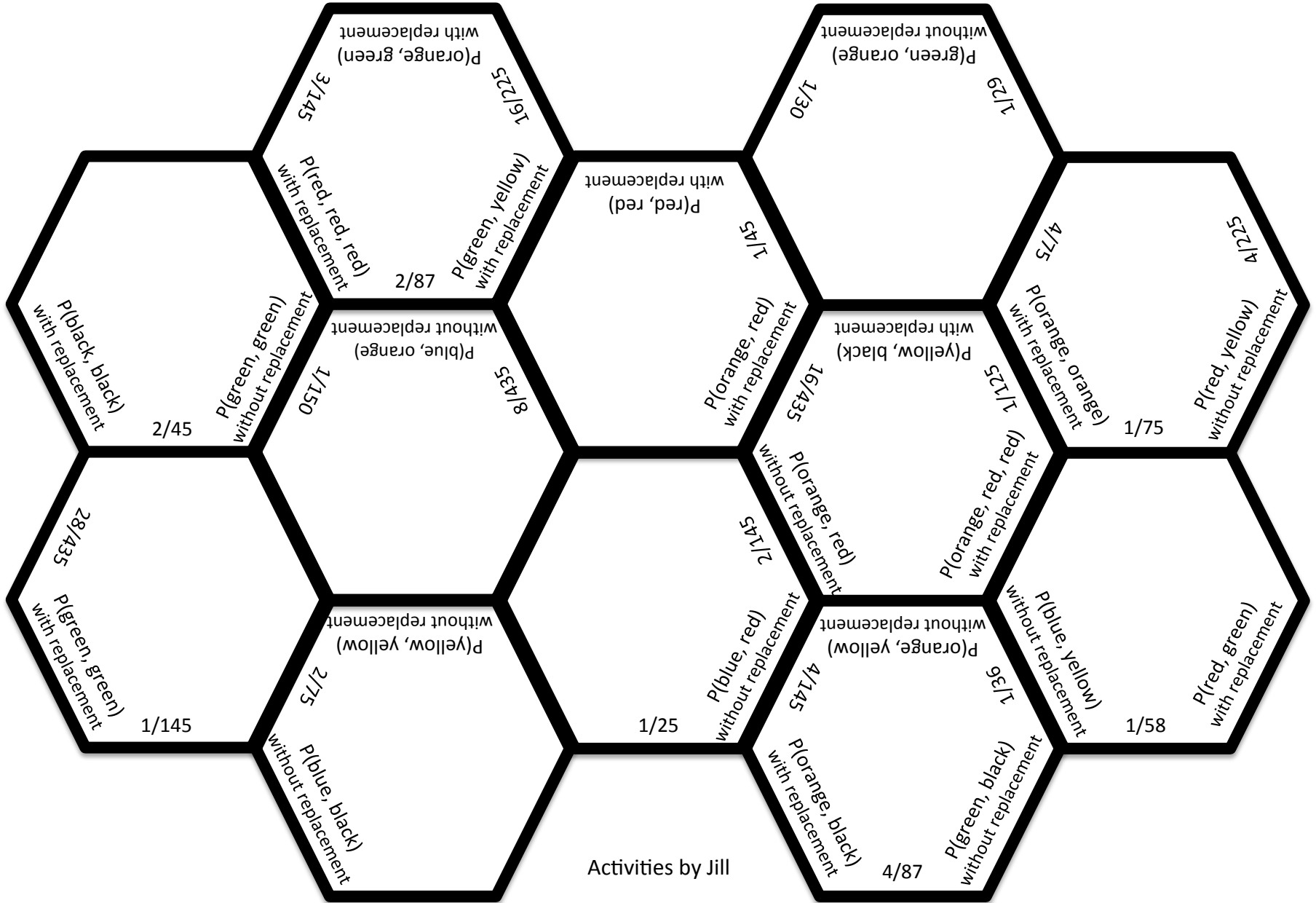
Cut the 12 hexagons apart. Then match each question to its answer. Glue the puzzle to a piece of paper when completed and attach your work.

P(red, yellow) without replacement	P(blue, yellow) without replacement	P(green, black) without replacement	P(orange, orange) with replacement	P(green, green) without replacement
P(red, red, red) with replacement	P(orange, yellow) without replacement	P(orange, red) with replacement	P(orange, green) with replacement	P(blue, orange) without replacement
P(red, red) with replacement	P(black, black) with replacement	P(red, green) with replacement	P(green, orange) without replacement	P(green, green) with replacement
P(yellow, black) with replacement	P(orange, black) with replacement	P(blue, red) without replacement	P(green, yellow) with replacement	P(yellow, yellow) without replacement
P(orange, red) without replacement	P(blue, black) without replacement	P(orange, red, red) with replacement		

A jar contains 4 blue, 6 red, 5 orange, 3 yellow, 4 black, 8 green marbles. Find each probability and show your work on the outline provided.

Cut the 12 hexagons apart. Then match each question to its answer.

Glue the puzzle to a piece of paper when completed and attach your work.



# Independent & Dependent Probability Puzzle

Name \_\_\_\_\_ **ANSWER KEY**

A jar contains 4 blue, 6 red, 5 orange, 3 yellow, 4 black, 8 green marbles. Find each probability and show your work below.

Cut the 12 hexagons apart. Then match each question to its answer. Glue the puzzle to a piece of paper when completed and attach your work.

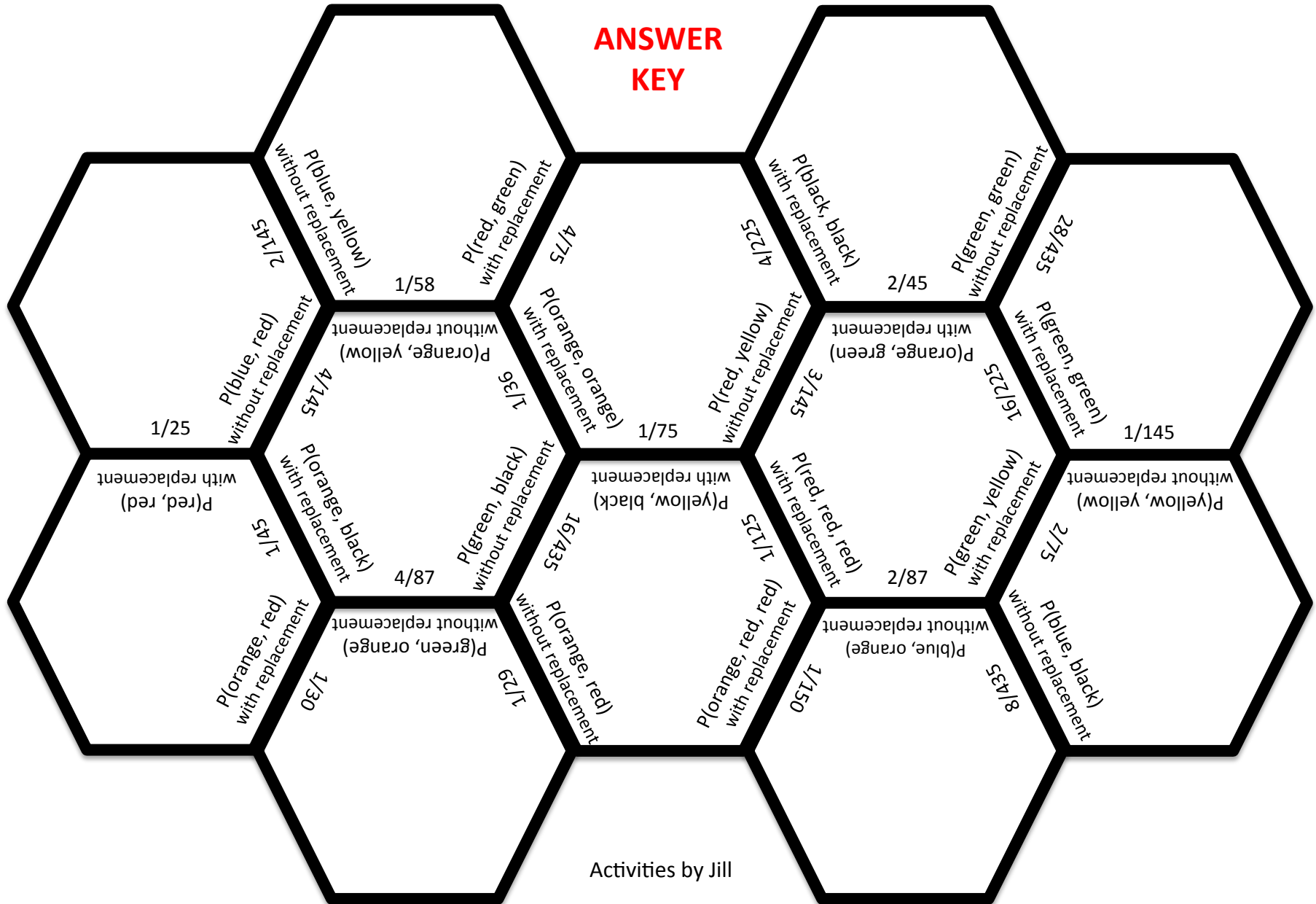
<p>P(red, yellow) without replacement</p> $\frac{6}{30} \cdot \frac{3}{29} = \frac{3}{145}$	<p>P(blue, yellow) without replacement</p> $\frac{4}{30} \cdot \frac{3}{29} = \frac{2}{145}$	<p>P(green, black) without replacement</p> $\frac{8}{30} \cdot \frac{4}{29} = \frac{16}{435}$	<p>P(orange, orange) with replacement</p> $\frac{5}{30} \cdot \frac{5}{30} = \frac{1}{36}$	<p>P(green, green) without replacement</p> $\frac{8}{30} \cdot \frac{7}{29} = \frac{28}{435}$
<p>P(red, red, red) with replacement</p> $\frac{6}{30} \cdot \frac{6}{30} \cdot \frac{6}{30} = \frac{1}{125}$	<p>P(orange, yellow) without replacement</p> $\frac{5}{30} \cdot \frac{3}{29} = \frac{1}{58}$	<p>P(orange, red) with replacement</p> $\frac{5}{30} \cdot \frac{6}{30} = \frac{1}{30}$	<p>P(orange, green) with replacement</p> $\frac{5}{30} \cdot \frac{8}{30} = \frac{2}{45}$	<p>P(blue, orange) without replacement</p> $\frac{4}{30} \cdot \frac{5}{29} = \frac{2}{87}$
<p>P(red, red) with replacement</p> $\frac{6}{30} \cdot \frac{6}{30} = \frac{1}{25}$	<p>P(black, black) with replacement</p> $\frac{4}{30} \cdot \frac{4}{30} = \frac{4}{225}$	<p>P(red, green) with replacement</p> $\frac{6}{30} \cdot \frac{8}{30} = \frac{4}{75}$	<p>P(green, orange) without replacement</p> $\frac{8}{30} \cdot \frac{5}{29} = \frac{4}{87}$	<p>P(green, green) with replacement</p> $\frac{8}{30} \cdot \frac{8}{30} = \frac{16}{225}$
<p>P(yellow, black) with replacement</p> $\frac{3}{30} \cdot \frac{4}{30} = \frac{1}{75}$	<p>P(orange, black) with replacement</p> $\frac{5}{30} \cdot \frac{4}{30} = \frac{1}{45}$	<p>P(blue, red) without replacement</p> $\frac{4}{30} \cdot \frac{6}{29} = \frac{4}{145}$	<p>P(green, yellow) with replacement</p> $\frac{8}{30} \cdot \frac{3}{30} = \frac{2}{75}$	<p>P(yellow, yellow) without replacement</p> $\frac{3}{30} \cdot \frac{2}{29} = \frac{1}{145}$
<p>P(orange, red) without replacement</p> $\frac{5}{30} \cdot \frac{6}{29} = \frac{1}{29}$	<p>P(blue, black) without replacement</p> $\frac{4}{30} \cdot \frac{4}{29} = \frac{8}{435}$	<p>P(orange, red, red) with replacement</p> $\frac{5}{30} \cdot \frac{6}{30} \cdot \frac{6}{30} = \frac{1}{150}$		

A jar contains 4 blue, 6 red, 5 orange, 3 yellow, 4 black, 8 green marbles. Find each probability and show your work on the outline provided.

Cut the 12 hexagons apart. Then match each question to its answer.

Glue the puzzle to a piece of paper when completed and attach your work.

## ANSWER KEY





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