Name_____

# Sample Spaces and The Counting Principle

Date_____ Period_____

**Represent the sample space using set notation.**

1) A sandwich shop has three types of sandwiches: ham, turkey, and chicken.

2) The chess club must decide when to meet for a practice. The possible days are Tuesday, Wednesday, or Thursday.

3) The chess club must decide when to meet for a practice. The possible days are Tuesday, Wednesday, or Thursday. The possible times are 3, 4, or 5 p.m.

4) When a button is pressed, a computer program outputs a random odd number greater than 1 and less than 9. You press the button twice.

5) A spinner can land on either red or blue. You spin and then roll a six-sided die.

6) There are two boys and a girl on a trivia team. Two questions remain. One team member is randomly picked to answer the first question and a different member is picked to answer the second question.

**Find the number of possible outcomes in the sample space.**

7) A jewelry store sells gold and platinum rings. Each ring is fitted with a ruby, sapphire, emerald, or diamond gemstone.

8) A spinner can land on either red, blue, or green. You spin twice.

9) Eight rooms in a house need to be painted. Each room can be painted white or yellow.

10) Six books need to be placed on a shelf. You randomly arrange the books on the shelf from left to right.

Name_____

# Sample Spaces and The Counting Principle

Date_____  Period_____

**Represent the sample space using set notation.**

1) A sandwich shop has three types of sandwiches: ham, turkey, and chicken.

{ham, turkey, chicken}

2) The chess club must decide when to meet for a practice. The possible days are Tuesday, Wednesday, or Thursday.

{Tuesday, Wednesday, Thursday}

3) The chess club must decide when to meet for a practice. The possible days are Tuesday, Wednesday, or Thursday. The possible times are 3, 4, or 5 p.m.

{(T, 3), (T, 4), (T, 5),
(W, 3), (W, 4), (W, 5),
(R, 3), (R, 4), (R, 5)}

4) When a button is pressed, a computer program outputs a random odd number greater than 1 and less than 9. You press the button twice.

{(3, 3), (3, 5), (3, 7),
(5, 3), (5, 5), (5, 7),
(7, 3), (7, 5), (7, 7)}

5) A spinner can land on either red or blue. You spin and then roll a six-sided die.

{(R, 1), (R, 2), (R, 3), (R, 4), (R, 5), (R, 6),
(B, 1), (B, 2), (B, 3), (B, 4), (B, 5), (B, 6)}

6) There are two boys and a girl on a trivia team. Two questions remain. One team member is randomly picked to answer the first question and a different member is picked to answer the second question.

{($B_1$, $B_2$), ($B_1$, G),
($B_2$, $B_1$), ($B_2$, G),
(G, $B_1$), (G, $B_2$)}

**Find the number of possible outcomes in the sample space.**

7) A jewelry store sells gold and platinum rings. Each ring is fitted with a ruby, sapphire, emerald, or diamond gemstone.

8

8) A spinner can land on either red, blue, or green. You spin twice.

9

9) Eight rooms in a house need to be painted. Each room can be painted white or yellow.

256

10) Six books need to be placed on a shelf. You randomly arrange the books on the shelf from left to right.

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