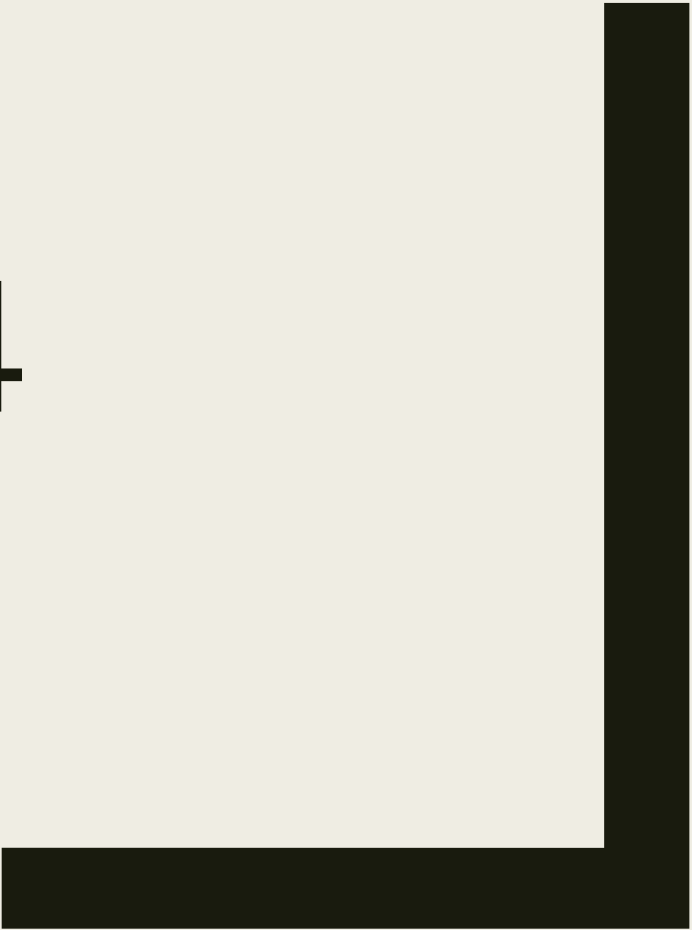




# ALGEBRA 4

Day 60



# Bell Work

What do we need to talk about from the review?

# Things to Study

## Level 2:

Fundamental Counting

Principal

Combination & Permutation

Probability

Mutually Exclusive

Independent vs Dependent

## Level 3:

Set up & Solve Combination  
and Permutation

Probability with multiple  
events

## Level 4:

Set up and solve your own  
probability problems

# Quiz From Last Time with Answers

## Quiz: Level 2

- You have 10 shirts and 8 pairs of pants. How many outfits could you wear?
- A bag has 6 red, 4 green, and 10 blue marbles.  
*Find  $P(\text{green})$*   *$P(\text{not red})$*
- Is the following independent or dependent: a student flips a coin and they roll an even number on a die?

## Quiz: Level 2

- You have 10 shirts and 8 pairs of pants. How many outfits could you wear? ***Answer: 80***

- A bag has 6 red, 4 green, and 10 blue marbles.

*Find  $P(\text{green})$*

***Answer: 4/20***

*$P(\text{not red})$*

***Answer: 14/20***

- Is the following independent or dependent: a student flips a coin and they roll an even number on a die?

***Answer: Independent***

# Quiz: Level 3

- If you have 6 novels, and 4 comic books in your backpack. How many ways can you randomly select two of them to read?

- A bag has 6 red, 4 green, and 10 blue marbles.

*Find  $P(\text{green or red})$*

*$P(\text{red then red})$  [with & without replacement]*

# Quiz: Level 3

- If you have 6 novels, and 4 comic books in your backpack. How many ways can you randomly select two of them to read?

***Answer:  $10C2 = 45$***

- A bag has 6 red, 4 green, and 10 blue marbles.

*Find  $P(\text{green or red})$  Answer:  $10/20$*

*$P(\text{red then red})$  with*

***Answer:  $6/20 * 6/20$***

*$9/100$*

*without*

***$6/20 * 5/19$***

*$3/38$*



## Quiz: Level 4

The dance coach has decided to randomly choose 4 players to represent the team as captains. The team consists of 12 seniors and 8 juniors. What is the probability that only one senior will be chosen at random?

## Quiz: Level 4

The dance coach has decided to randomly choose 4 players to represent the team as captains. The team consists of 12 seniors and 8 juniors. What is the probability that only one senior will be chosen at random?

$$\begin{aligned} (12C1 / 20C4) &= 12/4845 \\ &= 4/1615 = 0.00247 = 0.247\% \end{aligned}$$

# Review Assignment

Page 752 #5-31

Page 757 #1-10, 18, 20

# Formulas for Test

$${}_nP_r = \frac{n!}{(n-r)!}$$

$$P(B|A) = \frac{P(A \text{ and } B)}{P(A)}$$

$$P(A \text{ and } B) = P(A) * P(B)$$

$${}_nC_r = \frac{n!}{(n-r)! \cdot r!}$$

$$P(A \text{ and } B) = P(A) * P(B|A)$$

$$P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$$