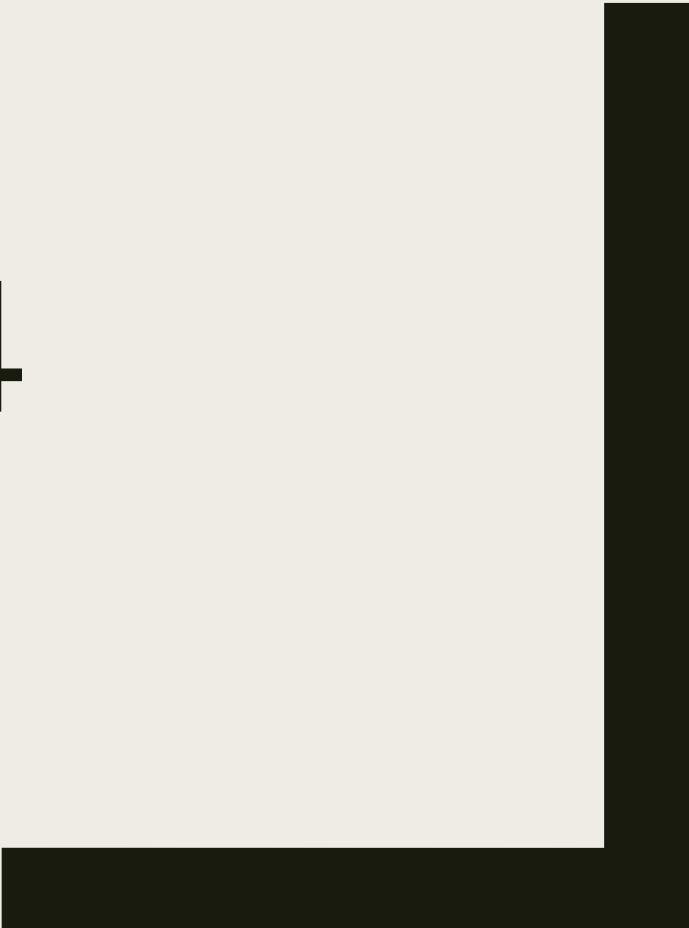




# ALGEBRA 4

Day 59



# Bell Work

If  $a$ ,  $b$ , and  $c$  are positive integers such that  $a^b = x$  and  $c^b = y$ , then  $xy = ?$

**F.**  $ac^b$

**G.**  $ac^{2b}$

**H.**  $(ac)^b$

**J.**  $(ac)^{2b}$

**K.**  $(ac)^{b^2}$

# 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: 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  $P(\text{green})$*   *$P(\text{not red})$*
- 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

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