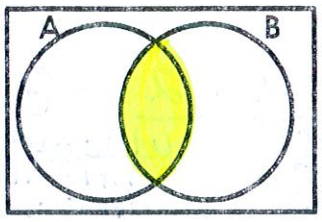
Name: Key Date: _____

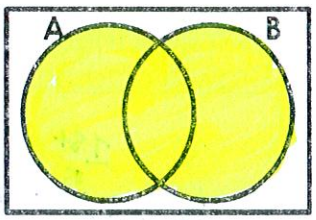
Using Venn Diagrams

Shade in the appropriate area of the Venn Diagram.

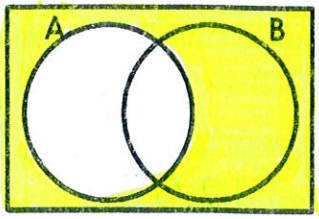
1. $A \cap B$



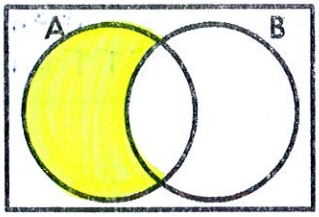
2. $A \cup B$



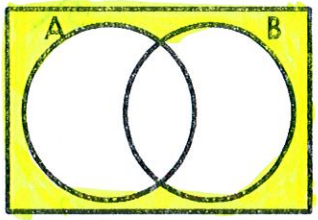
3. A'



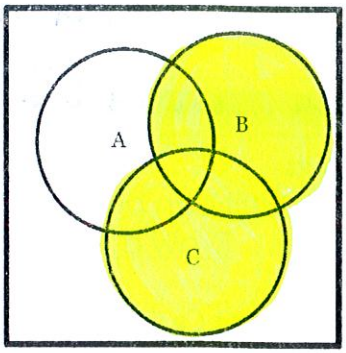
4. $A \cap B'$



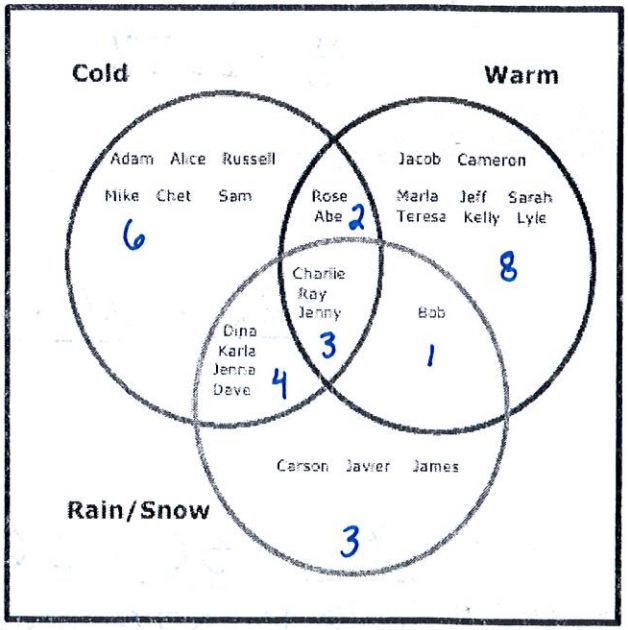
5. $(A \cup B)'$



6. $B \cup C$



Mr. Grisham took a poll of his student's favorite type of weather. The students had the choice of hot, cold, and/or rain/snow. The results are displayed in the Venn Diagram. Write your answer as a reduced fraction.



5/9 6. Find P(Cold). 15/27

13/27 7. Find P(Warm)'.

5/27 8. Find P(Cold ∩ Warm).

4/27 9. Find P(Warm ∩ Rain).

1/9 10. Find P(Warm ∩ Cold ∩ Rain). 3/27

8/9 11. Find P(Cold ∪ Warm). 24/27

GSE Geometry Unit 8 – Probability 8.1 – Practice

Name: Key Date: _____

Chick-fil-A

For a kid's meal, you have a choice of 2 meals (nuggets or filet strips), 2 sides (fries or fruit cup), and 4 drinks (soda, lemonade, milk, or juice). You want to eat a different kid's meal every day. How many days can you order a different meal?

$2 \cdot 2 \cdot 4 = 16$ different days

Coins

To decide on punishments, Mr. Suttle flips a coin (Heads- ISS, Tails- OSS). He flipped a coin 3 times on the first day of school. Draw a diagram.

$2 \cdot 2 \cdot 2 = 8$ outcomes

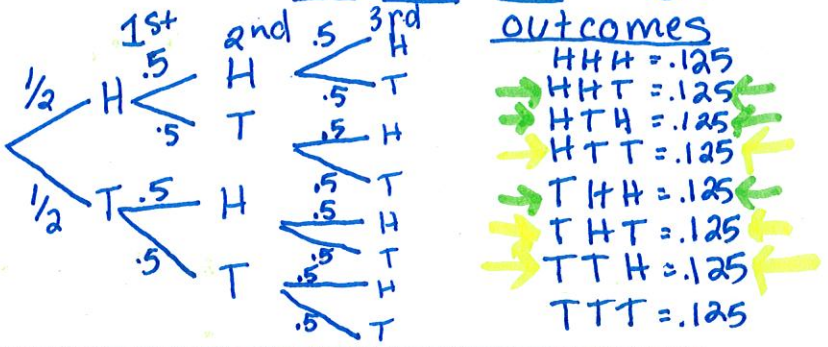
Number of Outcomes 8

P(all ISS) 12.5%

P(all OSS) 12.5%

P(1 ISS and 2 OSS) 37.5%

P(2 ISS and 1 OSS) 37.5%



Outfits

Your outfit can be made up of 3 shirts (red, black and white) and 2 pants (jeans and khakis). Draw a diagram.

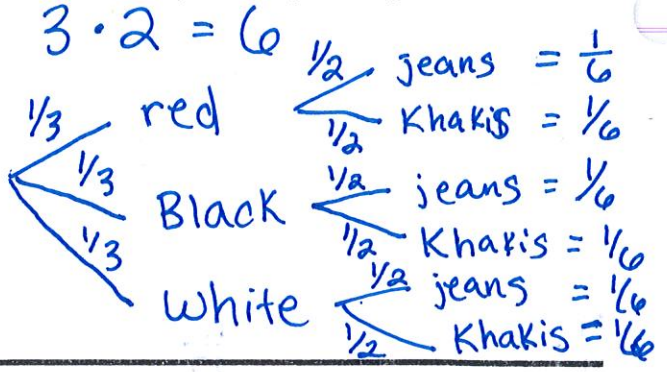
$3 \cdot 2 = 6$

Number of Outcomes 6

P(red shirt and khaki pants) $\frac{1}{6} = 16.7\%$

P(jeans) $\frac{3}{6} = \frac{1}{2} = 50\%$

P(not black shirt) $\frac{2}{3} = 66.7\%$



Passwords

You make a 3-letter password; you can use letters more than once. How many different outcomes are there for your password? Do you think it's reasonable for teenagers to say that someone just happened to figure out their password?

$26 \cdot 26 \cdot 26 = 17{,}576$ different passwords

You make a password using letters (A-Z) and numbers (0-9). How many codes can be created for a 3-space password? Why do some websites require you to use numbers in your passwords?

$36 \cdot 36 \cdot 36 = 46{,}656$ passwords

$46{,}656 > 17{,}576$ which makes password strength greater