

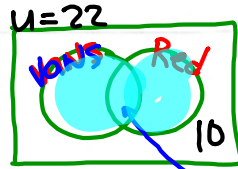
## Pick up and Start the Warm Up

**The dastardly price of convenience.**

Posted on April 6, 2012 by Jessica Hagy

1. A car dealer has 22 vehicles on his lot. If 8 of the vehicles are vans and 6 of the vehicles are red, and 10 vehicles are neither vans nor red, how many red vans does he have on his lot?
2. In Ms. Wright's English class, 16 students are in band, 7 students play sports, 3 students participate in both activities, and 9 students are not in band and do not play sports. How many students are in Ms. Wright's English class?

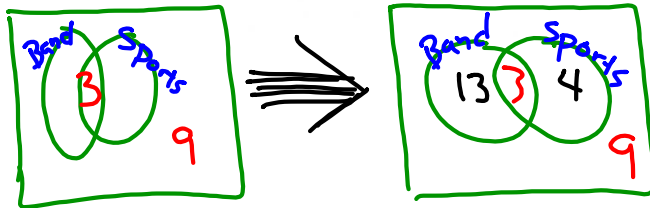
1. A car dealer has 22 vehicles on his lot. If 8 of the vehicles are vans and 6 of the vehicles are red, and 10 vehicles are neither vans nor red, how many red vans does he have on his lot?



$$12 = 8 + 6 - x$$

$$x = 2$$

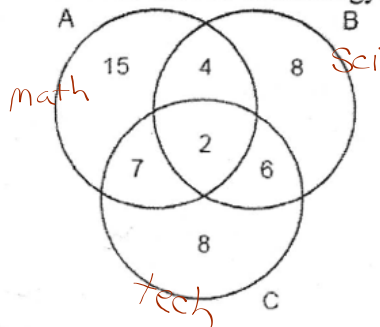
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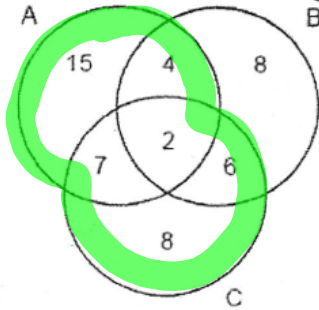
$$13 + 3 + 4 + 9$$

$$= 29 \text{ students}$$

3. The accompanying Venn diagram shows the number of students who take various courses. All students in circle  $A$  take mathematics. All in circle  $B$  take science. All in circle  $C$  take technology. What percentage of the students take mathematics or technology?



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math or  
tech

$$15 + 4 + 7 + 2 + 8 + 6 = 42$$

$$\frac{42}{50} = .84$$

84%  
take math  
or tech

## describe Sampling Process

Primary  
Data

↓  
Choosing who  
to survey

Secondary  
Data

↓  
172 countries  
↓  
Sample 50

- Simple Random Sample (SRS)
- Cluster Sample
  - Decide on clusters
  - SRS to choose cluster
  - Survey everyone in cluster
- Systematic Random Sample

Raw  
unsummarized  
data

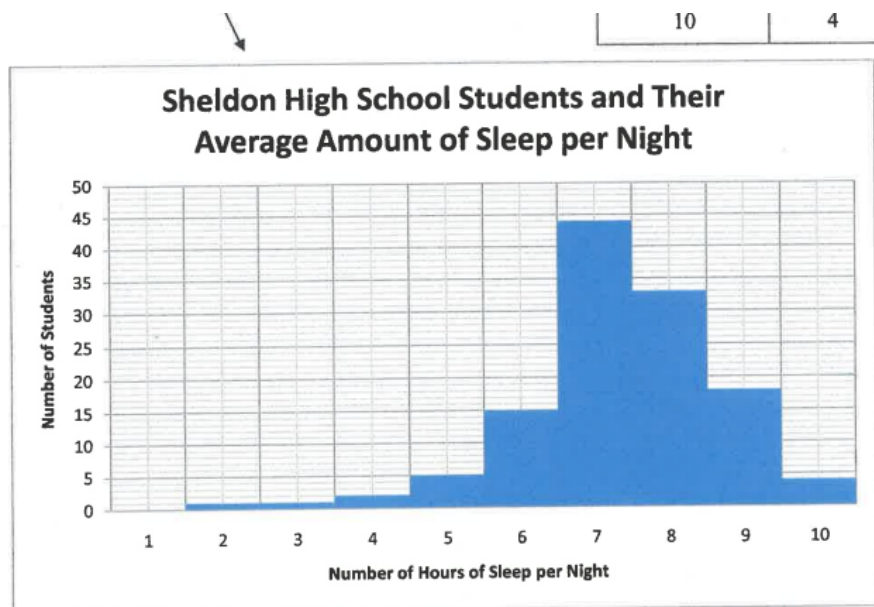
→ Presentation Form

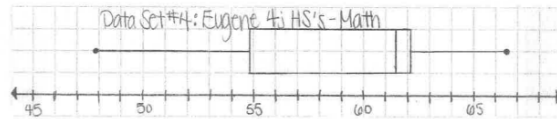
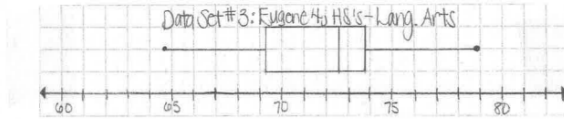
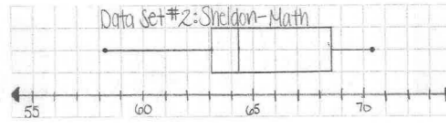
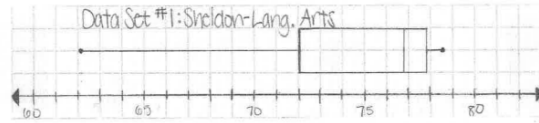
- Labels - accurate & precise
- with units (as appropriate)
  - App. A (B...)

page numbers - wait for  
final draft

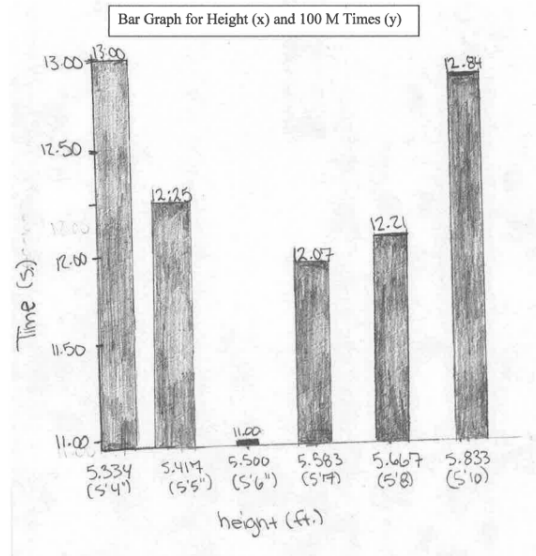
Follow Guidelines  
on P4 ☺

If you don't get your Draft #1  
feedback by tomorrow,  
extend the date for you (Not everyone,  
just you)





Graph paper ?

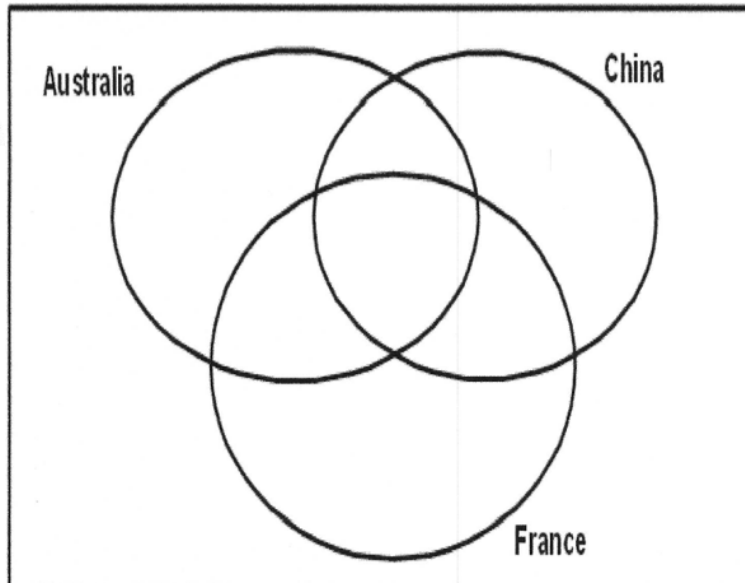


## Today's Aim:

- Analyze Venn Diagrams
- Use Venn Diagrams to solve problems.
- Continue to practice using Venn Diagrams and Sets.

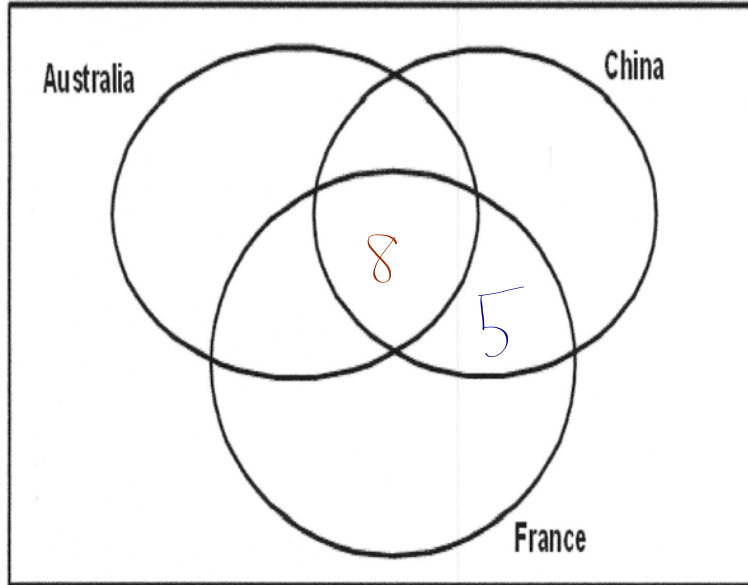
A group of students were asked if they had ever visited France, China and Australia

27 had visited none of the countries  
111 had visited Australia  
48 had visited China  
125 had visited France  
23 had been to Australia and China  
40 had been to Australia and France  
13 had been to France and China  
8 had been to all three



A group of students were asked if they had ever visited France, China and Australia

- 24 had visited none of the countries
- 111 had visited Australia
- 48 had visited China
- 125 had visited France
- 23 had been to Australia and China
- 40 had been to Australia and France
- 13 had been to France and China
- 8 had been to all three



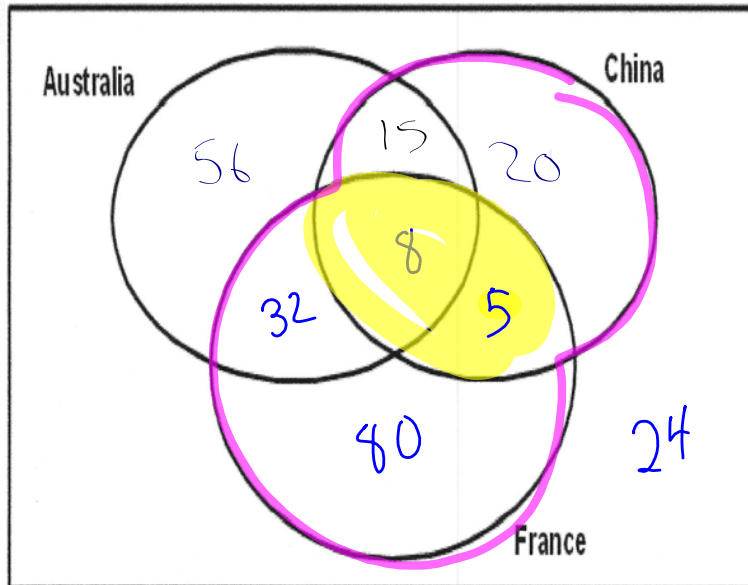
A group of students were asked if they had ever visited France, China and Australia

- 24 had visited none of the countries
- 111 had visited Australia
- 48 had visited China
- 125 had visited France
- 23 had been to Australia and China
- 40 had been to Australia and France
- 13 had been to France and China
- 8 had been to all three

$$125 + 48 - 13$$

$$P(\text{France or China})$$

$$= \frac{160}{240}$$

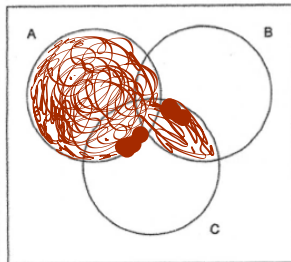




# Shading

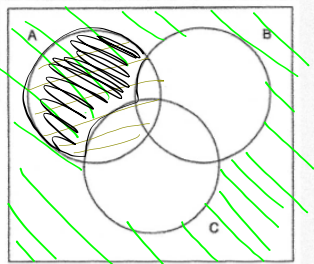
## 3 set Venn Diagrams

will work on for bit.



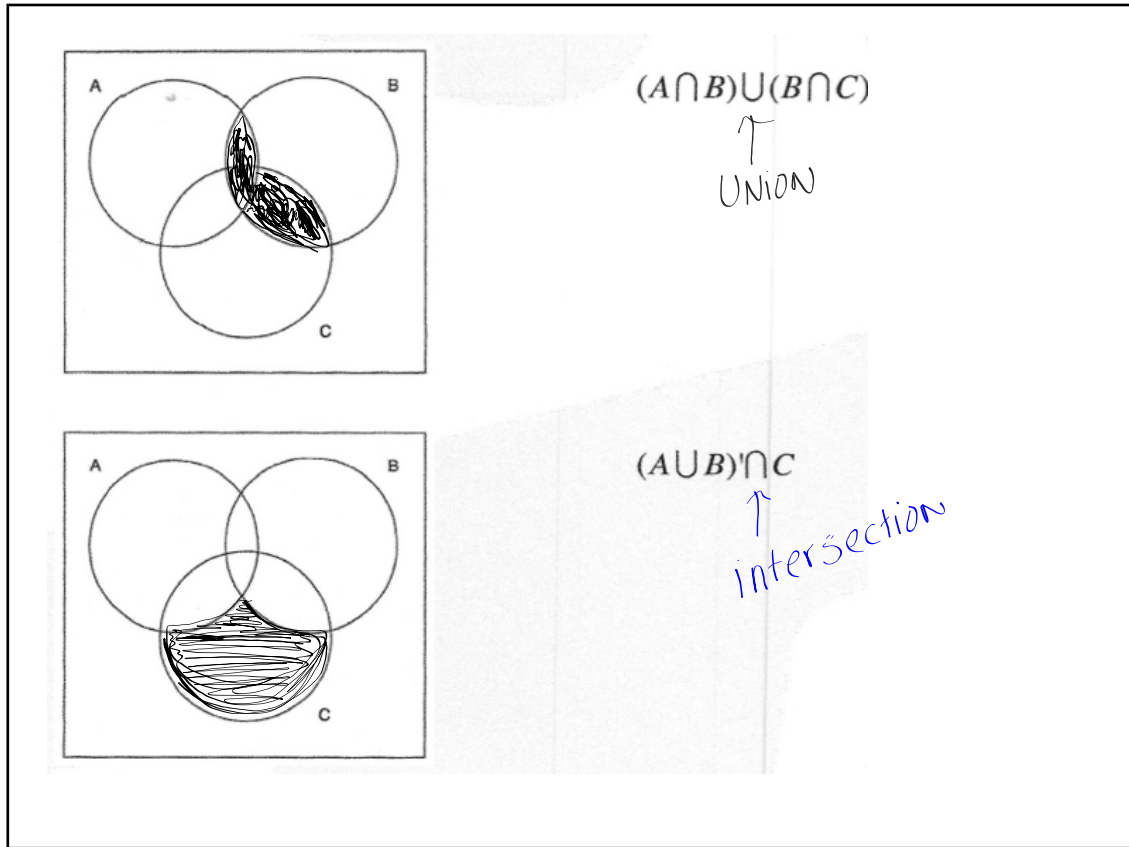
$$A \cup (B \cap C)$$

↑  
union



$$(A \cup B) \cap A$$

↑  
Intersection



back side

# Interpreting

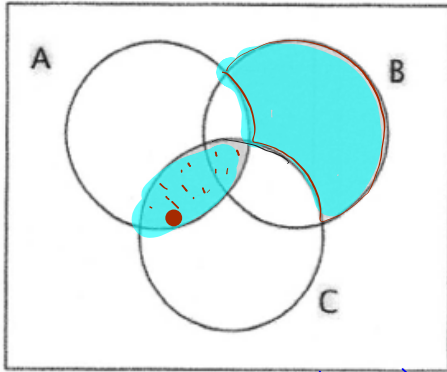
multiple possible answers

In the following diagrams, define the set that has been shaded

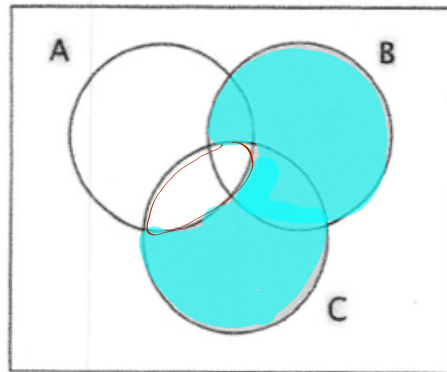
$A \cap B \cap C$        $(A \cup B)$        $(A \cup C)'$   
 $(A \cap B) \cup (B \cap C) \cup (A \cap C)$   
 $B \cap (A \cup C)'$        $(A \cap B)'$   
 $(B \cup (A \cup C))'$

$(A \cap C) \cup ((A \cup C)' \cap B)$

$((A \cup B)' \cap C) \cup (B \cap (A \cap B \cap C)')$

$B \cup (A \cap C)$ 


$$(A \cap C) \cup ((A \cap C)' \cap B)$$



$$(A \cap C)' \cap (B \cup C)$$

B.B

Set/Venn Assignment #3 is a handout

You have the rest of the period to work on this. Due tomorrow.

Keep making progress on your project. Use this time to ask me questions or run ideas by me.