

Section/Lesson Title: PROBLEM SOLVING : VENN DIAGRAMS

Materials: WS

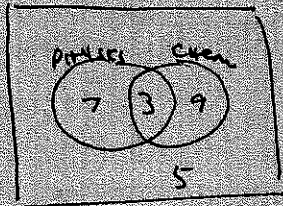
HW# 18  
25 + WS

Reflections:

I PROBLEM SOLVING WITH VENN DIAGRAMS

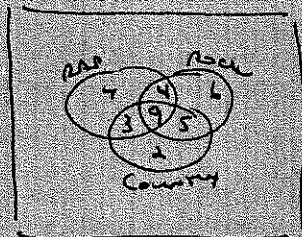
A TAD  
STUPID!

- ① IN A GROUP OF STUDENTS, 12 ARE TAKING CHEMISTRY, 10 ARE TAKING PHYSICS, 3 ARE TAKING BOTH, 5 ARE NOT TAKING EITHER. HOW MANY STUDENTS ARE THERE?



$$7 + 3 + 9 + 5 = \boxed{24 \text{ STUDENTS}}$$

- ② IN A POLL OF 46 STUDENTS, 23 LIKED RAP, 24 LIKED ROCK, 19 LIKED COUNTRY, 12 LIKED RAP & COUNTRY, 13 LIKED BOTH RAP & ROCK, 14 LIKED COUNTRY & ROCK, 9 LIKED ALL 3. HOW MANY DIDN'T LIKE ANY OF THEM?



$$7 + 4 + 13 + 9 + 5 + 2 = 36 \text{ LIKED SOMETHING}$$

$$46 - 36 = \boxed{10 \text{ WHO DIDN'T LIKE ANY}}$$

too much  
like  
assignment  
for  
this!

- ③ A BASEBALL MANAGER LOOKED OVER HIS ROSTER AND NOTICED THE FOLLOWING FACTS:

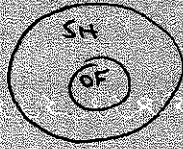
- + EVERY OUTFIELDER IS A SWITCH-HITTER
- + HALF OF ALL INFIELDERS ARE SWITCH-HITTERS
- + HALF OF ALL SWITCH-HITTERS ARE OUTFIELDERS
- + THERE ARE 14 INFIELDER; 8 OUTFIELDERS
- + NO INFIELDER IS AN OUTFIELDER

How MANY SWITCH-HITTERS ARE NEITHER OUTFIELDERS OR INFIELDER? →

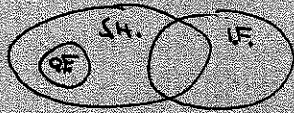


THIS IS A DIFFERENT TYPE OF VENN BECAUSE IT IS NOT OBVIOUS AT FIRST WHAT THE DIAGRAM LOOKS LIKE:

1st ALL OUTFIELDERS ARE SWITCH-HITTERS

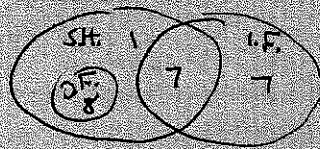


2nd INFIELDERS  $\rightarrow \frac{1}{2}$  ARE SH SO THEY MUST OVERLAP



ALSO, NO I.F. IS AN O.F. SO THEY DON'T OVERLAP

3rd  
#s



14 I.F.  $\rightarrow \frac{1}{2}$  ARE S.H.  $\rightarrow 7:7$

8 O.F.  $\rightarrow$  ALL 8 IN CIRCLE

$\frac{1}{2}$  S.H. ARE O.F.  $\rightarrow$  16 S.H. TOTAL

WE HAVE 15 SO FAR  $\rightarrow$  1 LEFT

1 S.H. IS NOT O.F. OR I.F.