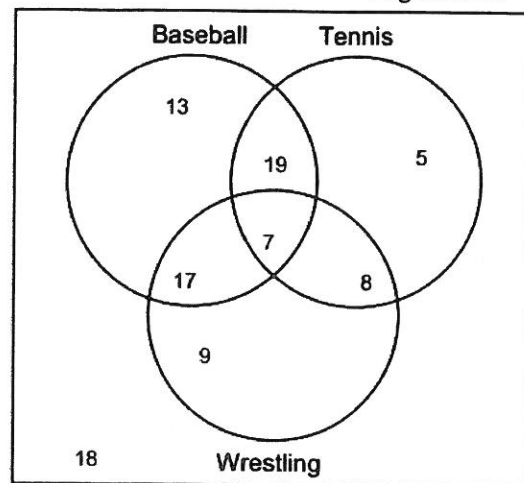


For each of the following, use the Venn Diagram to:

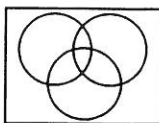
- a) State how many elements are in the stated set or subset
- b) Name the set using Set Symbols
- c) Shade the Venn diagram.



1. Students who were given the survey

- a. b.

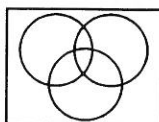
c.



2. Students who like Tennis

- b. b.

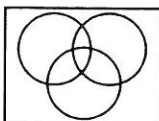
c.



3. Students who like Tennis, but not Baseball both

- b. b.

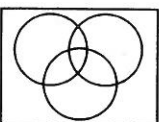
c.



4. Students who ONLY like Baseball

- b. b.

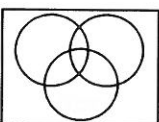
c.



5. Students who like Tennis or Wrestling.

- c. b.

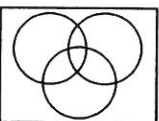
c.



6. Students who like Baseball and Wrestling.

- d. b.

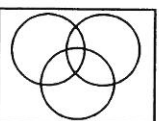
c.



7. Students who like Baseball and Wrestling, but not Tennis

- c. b.

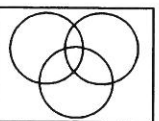
c.



8. Students who do not like Tennis or Wrestling

- d. b.

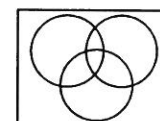
c.



9. Students who like Tennis or Wrestling, not

- a. b.

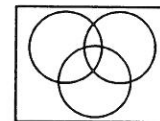
c.



10. Students who do not like Wrestling

- a. b.

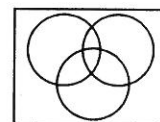
c.



11. Students who only like two sports

- a. b.

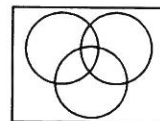
c.



12. Students who like two sports, but not Tennis.

- a. b.

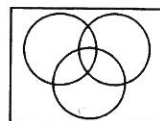
c.



13. Students who like all three sports

- a. b.

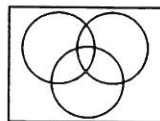
c.



14. Students who don't like any of these sports.

- a. b.

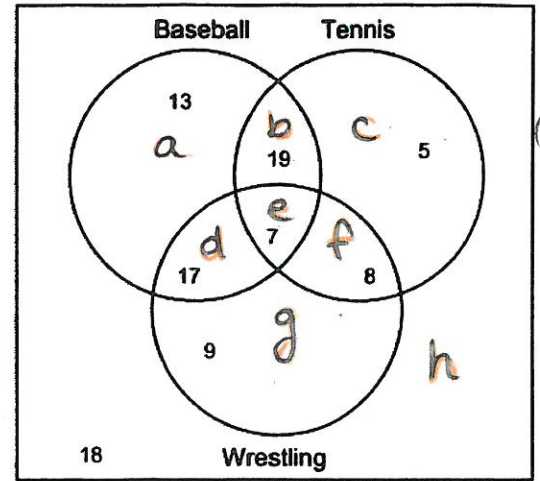
c.



Answer key

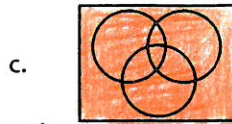
For each of the following, use the Venn Diagram to:

- State how many elements are in the stated set or subset
- Name the set using Set Symbols
- Shade the Venn diagram.



1. Students who were given the survey

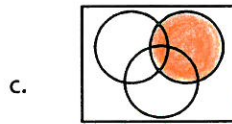
a. 96 b. U



$\{a, b, c, d, e, f, g, h\}$

2. Students who like Tennis

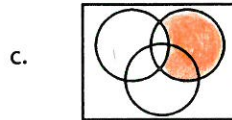
a. 39 b. T



$= \{b, c, e, f\}$

3. Students who like Tennis, but not Baseball

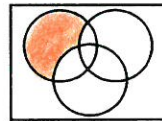
a. 13 b. $T \cap \bar{B}$



$= \{c, f\}$

4. Students who ONLY like Baseball

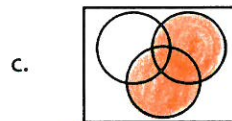
a. 13 b. $B \cap (\overline{T \cup W})$



$= \{a\}$

5. Students who like Tennis or Wrestling

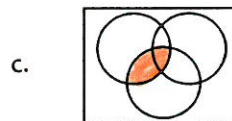
a. 65 b. $T \cup W$



$= \{b, c, d, e, f, g\}$

6. Students who like Baseball and Wrestling

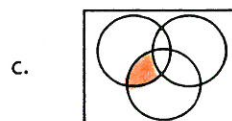
a. 24 b. $B \cap W$



$= \{d, e\}$

7. Students who like Baseball and Wrestling, but not Tennis

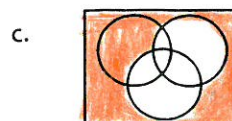
a. 17 b. $B \cap W \cap \bar{T}$



$= \{d\}$

8. Students who do not like Tennis or Wrestling

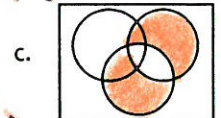
a. 31 b. $\overline{T \cup W}$



9. Students who like Tennis or Wrestling, not both

$(T \cap \bar{W}) \cup (W \cap \bar{T})$

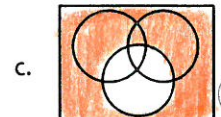
a. 50 b. or



$(T \cup W) \cap (\overline{T \cap W}) = \{b, c, d, g\}$

10. Students who do not like Wrestling

a. 55 b. \bar{W}

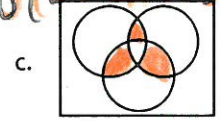


$= \{a, b, c, h\}$

11. Students who only like two sports

$(B \cap W \cap \bar{T}) \cup (B \cap \bar{W} \cap T) \cup (\bar{B} \cap W \cap T)$

a. 44 b.

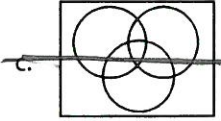


$= \{b, d, f\}$

~~12. Students who like two sports, but not Tennis~~

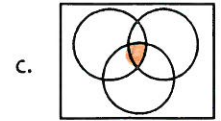
same as #7

~~a. b.~~



13. Students who like all three sports

a. 7 b. $B \cap W \cap T$



$= \{e\}$

14. Students who don't like any of these sports.

a. 18 b. $\overline{B \cup W \cup T}$

