

Xavier School
Module for Yunnan
SETS



EXERCISES: Applications of Venn Diagram

1. Last year, at Xavier High School, a survey showed that

- 65 students participated in swimming or basketball
- 50 participated in swimming
- 10 participated in both sports

How many played basketball? How many students were surveyed?

2. The result of a survey of 50 students showed the following preferences in writing instruments.

- 16 liked pencils
- 18 liked sign pens
- 24 liked ball pens
- 4 liked pencils and sign pens
- 5 liked sign pens and ball pens
- 8 liked pencils and ball pens
- 3 liked all three

Find the number of students that liked

- a) none of the three writing instruments
- b) pencils and sign pens but did not like ball pens
- c) only pencils
- d) only ball pens
- e) sign pens or ball pens

3. In a physical training period 54 boys were given 3 sets A, B and C.

- | | |
|-------------------------|----------------------------|
| 25 passed test A | 10 passed tests A and C |
| 31 passed test B | 17 passed tests B and C |
| 28 passed test C | 4 passed tests A, B, and C |
| 11 passed tests A and B | |

How many boys did the following?

- | | |
|------------------------------|-----------------------------|
| a) failed all the tests | e) passed at least one test |
| b) passed test C only | f) passed at least 2 tests |
| c) passed tests B and C | g) passed exactly one test |
| d) passed tests B and C only | h) passed exactly two tests |

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4. In a TV survey, it was found that 35 people watch comedies, 20 watch westerns, and 17 watch sports. Of these, 7 watch both comedies and westerns, 4 watch both westerns and sports, 6 watch comedies and sports, but only 2 watch all three types. How many viewers surveyed watch the following?
- a) sports only
 - b) westerns only
 - c) comedies and sports
 - d) comedies and sports only
 - e) watch none of these shows if 100 people were surveyed
5. 100 Neanderthals were surveyed regarding their favorite possessions.
- 32 own a stick
 - 30 own a rock
 - 31 own a bone
 - 14 own a rock and own a bone
 - 13 own a bone and own a stick
 - 12 own a rock and own a stick
 - 3 own a rock and own a bone and own a stick

How many own none of these things?