

Please complete the following problems for homework. Check Mrs. Kent's website for due dates.

Homework is an independent assignment and must be completed without assistance from other students. Students may not use unauthorized assisted devices on this assignment, including but not limited to Excel or other computer software/programs/devices. A handheld calculator to assist with arithmetic may be used. All problems must show all work on this paper (or an attached paper) to receive any credit since partial credit is only available on tests or quizzes.

1. Use the given set to find the following.

$$A = \{Spade, club, diamond\}$$

a. List all of the proper subsets of the given set.

b. List all of the subsets of the given set.

2. Use the given set to find the following.

$$B = \{4, 7, 8\}$$

a. List all of the proper subsets of the given set.

b. List all of the subsets of the given set.

3. Use your knowledge of the given universal set to provide a proper subset which has 3 elements.

a. $\xi = \{school\ subjects\ at\ LCCA\}$

b. $\xi = \{all\ odd\ numbers\ less\ than\ 77\}$

4. Use the following set information to find the indicated items.

$$\xi = \{0, 6, 8, 9, 11, 18, 20, 22, 25\}$$

$$A = \{6, 8, 18, 20\}$$

$$B = \{6, 9, 18, 22, 25\}$$

- a. Assuming $A \subset \xi$, find the list version of set A' .
- b. Assuming $B \subset \xi$, find the list version of set B' .
- c. Is $\phi \subset \xi$? Write at least one sentence explaining why or why not.