

East Los Angeles College

Department of Mathematics

Math 230

Test 1

Determine the listed items for the indicated sets.

1. $A = \{x|x \text{ is a vowel}\}$

2. $B = \{x|x \text{ is a city in California}\}$

3. $C = \{x|x \text{ is a fruit}\}$

4. $D = \{x|x \text{ is a color}\}$

5. N

6. W

7. Z

8. ϕ

9. $E = \{x|x \text{ is a natural number and } x > 3\}$

10. $F = \{x|x \text{ is a whole number and } x \leq 5\}$

Let the universe $U = \{a, b, c, d, e, 1, 2, 3, 4, 5, 6\}$

$A = \{a, b, c, 1, 2, 3\}$ $B = \{1, 2, 3, 4\}$ $C = \{2, 4, 6\}$

Determine the following operations.

11. $A \cup B$

12. $A \cap B$

13. $B \cup C$

14. $B \cap C$

15. A'

16. B'

17. C'

18. $n(A \cup B)$

19. $n(A \cap B)$

20. $n(A)$

21. $n(B)$

22. $n(C)$

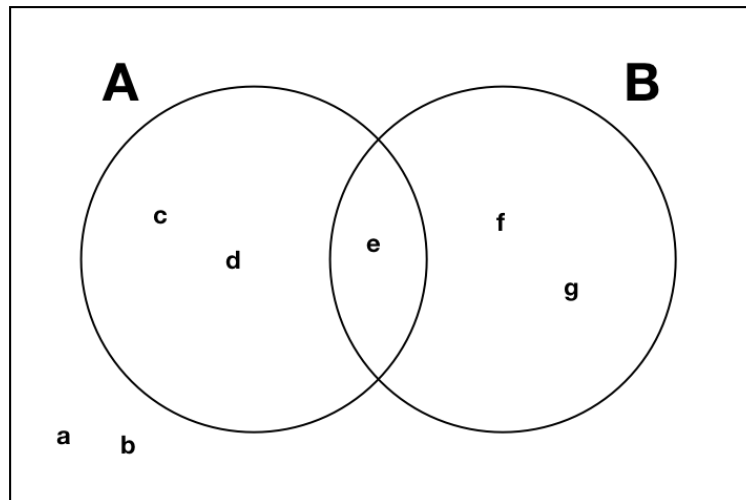
23. $n(A')$

24. $n(B')$

25. $n(C')$

26. $n(U)$

Consider the following Venn Diagram of two sets.



Determine the following.

27. A

28. B

29. A'

30. B'

31. $A \cup B$

32. $A \cap B$

33. $A - B$

34. $B - A$

35. U

36. $n(U)$

37. $n(A)$

38. $n(B)$

39. $n(A')$

40. $n(B')$

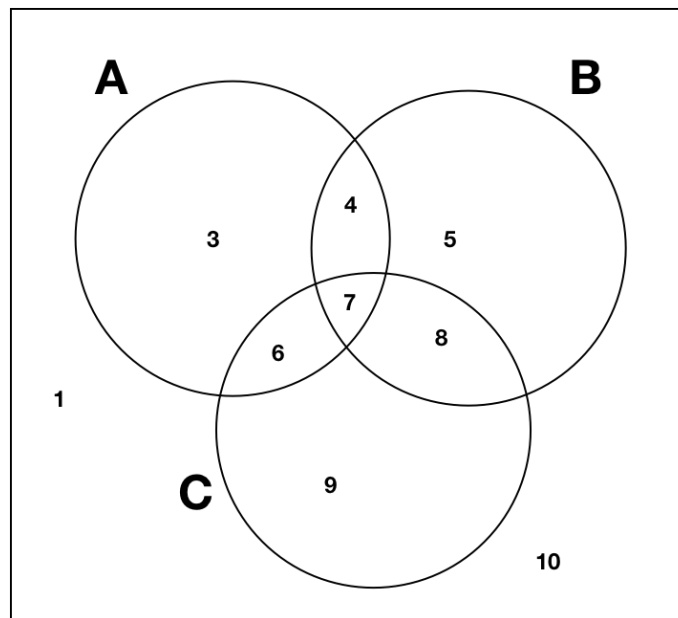
41. $n(A \cup B)$

42. $n(A \cap B)$

43. $n(A - B)$

44. $n(B - A)$

Consider the following Venn Diagram of three sets.



Determine the following.

45. U

46. A

47. B

48. C

49. $A \cup B \cup C$

50. $A \cap B \cap C$

51. $(A \cup B \cup C)'$

52. $(A \cap B \cap C)'$

53. $A \cup C$

54. $B \cap C$

55. $(A \cup C)'$

56. $(B \cap C)'$

57. What is your name?