

Math 1160 – Section 5.1 Answer Key

2a. $\{ 4, 5 \}$

2b. $\{ 1, 2, 3, 5 \}$

2c. \emptyset or $\{ \}$

2d. $\{ 5 \}$

4a. $\{ a, b \}$

4b. $\{ a \}$

4c. $\{ a, c \}$

4d. $\{ a, b, c \}$

8a. $\{ \text{All corporations with headquarters NOT in New York City} \}$

8b. $\{ \text{All } \textit{publicly-owned} \text{ corporations} \}$

OR

$\{ \text{All } \textit{not privately-owned} \text{ corporations} \}$

8c. $\{ \text{All privately-owned corporations with headquarters in NYC} \}$

8d. $\{ \text{All } \textit{publicly-owned} \text{ corporations with headquarters in NYC} \}$

OR

$\{ \text{All } \textit{not privately-owned} \text{ corporations with headquarters in NYC} \}$

14a. \emptyset or $\{ \}$

14b. $\{ 3, 5 \}$

14c. \emptyset or $\{ \}$

14d. $\{ 2, 4 \}$

14e. $\{ 1, 3, 4, 5 \}$

14f. $\{ 1, 2, 3, 4, 5 \}$ The universal set

14g. $\{ 1, 2, 3, 5 \}$

14h. $\{ 1, 2, 3, 5 \}$

21. $L \cup T$

22. P'

23. $P \cap L$

24. $L \cap (P' \cup T')$ OR $L \cap (P \cap T)'$ **DeMorgan's Law**

25. $P \cap L \cap T$

34. $\{ \text{Female Teachers at Mount College} \}$

36. $\{ \text{Females OR Teachers at Mount College} \}$

38. $\{ \text{People at Mount College who are NOT "male students"} \}$

OR

$\{ \text{People at Mount College who are not students OR not males} \}$

OR

$\{ \text{People at Mount College who are not students or female} \}$