

NAME: _____

DATE _____

Problem Solving Venn Diagrams

Question 2:

A business firm has 144 employees. 39 have Master's Degrees, 84 have a Bachelor's Degree, 42 have neither a Master's nor a Bachelor's degree. Some have both a Master's and a Bachelor's degree.

Evaluate a) The number of employees with both a Master's and a Bachelor's degree?
 b) The number of employees with only a Bachelor's.

Solution: Fill in the spaces with the information given.

No. of employees, $U =$ _____

No. of employees with a Master's, $n(M) =$ _____

No. of employees with a Bachelor's, $n(B) =$ _____

No. of employees with both, $n(M \cap B) = x$

No. of employees with none = _____

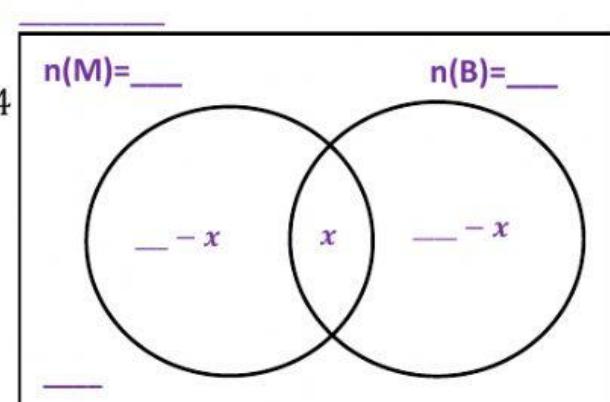
$$U = \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}} - x + x + \underline{\hspace{2cm}} - x + 42 = 144$$

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} - x = 144$$

$$\underline{\hspace{2cm}} - x = 144$$

$$n = \underline{\hspace{2cm}} - \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ employees}$$



a) $n(M \cup B) =$ _____ employees

b) $n(B \text{ only}) =$ _____ employees