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## Programming Assignment

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### complement\_of\_union

1 point possible (graded)

Define  $A$ ,  $B$ , and  $U$  as follows:

$$A = \{-6, 3, 4, 5\}$$

$$B = \{-6, 5, 13\}$$

$$U = A \setminus B \cup \{12, -2, -4\}$$

Which of the following is the correct output for `complement_of_union(A, B, U)`

☐  $\{-6, -2, 3, 4, 13\}, \{-6, -2, 4, 12\}$

☐  $\{-4, -2\} \cup \{-6, -4, 3, 5, 13\}$

☒  $\{-6, 3, 4, 5, 13\}, \{-4, -2, 12\}$  ✓

Submit

You have used 0 of 2 attempts

**i** Answers are displayed within the problem

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## intersection\_of\_complements

1 point possible (graded)

Like before, define  $A$ ,  $B$ , and  $U$  as follows:

$$A = \{-6, 3, 4, 5\}$$

$$B = \{-6, 5, 13\}$$

$$U = A \setminus B \cup \{12, -2, -4\}$$

Which of the following is the correct output for `intersection_of_complements(A, B, U)`

☐  $\{-6, -2, 3, 4, 13\}, \{-4, -2, 12, 13\}$

☒  $\{-4, -2, 12, 13\}, \{-4, -2, 12\}$  ✓

☐  $\{-4, -2, 12\}, \{-4, -2, 12, 13\}$

Submit

You have used 0 of 2 attempts

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**i** Answers are displayed within the problem

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## product\_of\_unions

1 point possible (graded)

Define  $A$ ,  $B$ ,  $S$ , and  $T$  as follows:

$$A = \{5\}$$

$$B = \{5\}$$

$$S = \{-1, 0\}$$

$$T = \{0\}$$

Which of the following is the correct output for `product_of_unions(A, B, S, T)`

☒  $\{5\}, \{(5, -1), (5, 0)\}$  ✓

☐  $(\{5, -1\}, \{5, 0\}), \{5\}$

☐  $\{5\}, (\{5, -1\}, \{5, 0\})$

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You have used 0 of 2 attempts

**i** Answers are displayed within the problem

## union\_of\_products

1 point possible (graded)

Again, define  $A$ ,  $B$ ,  $S$ , and  $T$  as follows:

$$A = \{5\}$$

$$B = \{5\}$$

$$S = \{-1, 0\}$$

$$T = \{0\}$$

Which of the following is the correct output for `union_of_products(A, B, S, T)`

☒  $\{(5, -1), (5, 0)\}, \{(5, -1), (5, 0)\}$  ✓

☐  $\{5, -1\}, \{5, 0\}$

☐  $(5, -1), (5, 0)$

Submit

You have used 0 of 2 attempts

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**i** Answers are displayed within the problem

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