

Homework 2

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1.7.5

(d) Some examples of elements w that are not in the set are $w = a$ or $w = b$ or $w = aba$. An example of an element w that is in the set is aa where $u = aaa$.

2.

(a) Another way to write this is $(a \cup b)^*$

(b) Another way to write this is also $(a \cup b)^*$

3.

$(c^*) \cup ((a)c^*) \cup ((aa)c^*) \cup ((b)c^*) \cup ((bb)c^*) \cup ((ab)c^*) \cup ((ba)c^*) \cup (c^*(a)) \cup (c^*(aa)) \cup (c^*(b)) \cup (c^*(bb)) \cup (c^*(ab)) \cup (c^*(ba)).$