The following table gives the number of respondents who obtained each score.

score	11	10	9	8	7	6
number	8	12	6	4	4	1

The numbers in parentheses below show the number of people who missed each question.

Tell whether the statements below make sense (*not* whether they are true or false).

1. $\{a, b\}^*$ is of infinite length. **nonsense (12)**
   Sets have *size* or *cardinality*, not length. Strings have length.
2. $\{a, b\}\{a, b\}\{a, b\}$ contains 8 elements. **sense (6)**
   The expression $\{a, b\}\{a, b\}\{a, b\}$ denotes a set, namely the set $\{aaa, aab, aba, baa, abb, bab, bba, bbb\}$, which in fact has 8 elements.
3. The string *aabab* is an element of the automaton M. **nonsense (4)**
   A string cannot be an element of an automaton. It can be an element of the set of strings accepted by an automaton. It would make sense to say *aabab* is an element of $L(M)$, or that *aabab* is accepted by M.
4. M is an automaton with start state $\{q\}$. **sense (12)**
   The states of an automaton can be any finite set, including sets of states of another automaton. In fact, this happens in the subset construction (K, Lectures 5,6).
5. $L(M) = \varnothing$. **sense (5)**
6. Any single string x is regular. **nonsense (11)**
   Strings cannot be regular. Sets of strings can be regular. It would be proper to say that any singleton set $\{x\}$ is regular.

Tell whether the given strings match the given regular expressions.

7. *aaba* $a^* + b^*$ **does not match (1)**
8. *abbbb* $(\varepsilon + a)^* b^*$ **matches (0)**
9. *abb* $b^* + (a + b)^* b$ **matches (6)**
10. *babab* $b(ab)^*$ **matches (0)**
11. *abb* $(a + b)(a + b)^* a(a + b)^*$ **does not match (0)**