Part (a):

```
public LogMessage(String message)
{
      int colon = message.indexOf(":");
      machineId = message.substring(0, colon);
      description = message.substring(colon + 1);
}
```

Part (b):

```
public boolean containsWord(String keyword)
{
   if (description.equals(keyword))
   {   return true;    }
   if (description.indexOf(keyword + " ") == 0)
   {   return true;    }
   if (description.indexOf(" " + keyword + " ") != -1)
   {   return true;    }
   if (description.length() > keyword.length())
   {
       if ((description.substring(description.length() -
                                  keyword.length() - 1).equals(
                                 " " + keyword)))
       {
          return true;
       }
   }
   return false;
}
```

Part (c):

```
public List<LogMessage> removeMessages(String keyword)
{
      List<LogMessage> removals = new ArrayList<LogMessage>();

      for (int i = 0; i < messageList.size(); i++)
      {
            if (messageList.get(i).containsWord(keyword))
            {
                  removals.add(messageList.remove(i));
                  i--;
            }
      }
      return removals;
}
```

FR Rubric (out of 9)

Part (a) `LogMessage` constructor **2 points**

Intent: *Initialize instance variables using passed parameter*

+1 Locates colon

+1 Initializes instance variables with correct parts of the parameter

Part (b) `containsWord` **2 points**

Intent: *Determine whether description properly contains a keyword*

+1 Identifies at least one properly-contained occurrence of `keyword` in `description`

+1 Returns `true` if and only if `description` properly contains `keyword`
Returns `false` otherwise (*no bounds errors*)

Part (c) `removeMessages` **5 points**

Intent: *Remove log messages containing keyword from system log list and return these messages in a new list*

+1 Accesses all items in `messageList` (*no bounds errors; point lost if no removal attempted*)

+1 Identifies keyword-containing entry using `containsWord`

+1 Adds all and only identified entries to new list (*point lost if original order not maintained*)

+1 Removes all identified entries from `messageList` (*point lost if* `messageList` *reordered)*

+1 Constructs and returns `new ArrayList<LogMessage>`