# Question 1

## a.

A cash flow diagram for this question is shown below:

The EAC of capital cost and EAC of operating cost for both defender and challenger over the years is summarized in the table below:



The values were determined with Excel. The following is a sample calculation for Year 2 defender:

Curves of the EAC of capital costs and EAC of operating costs, including EAC of total costs, are shown below:

## b.

The economic lives associated with the minimum EAC of total costs for both defender and challenger are shown below:

|  |  |
| --- | --- |
|  | **Economic Life (years)** |
| **Defender** | 4 |
| **Challenger** | 1 |

## c.

To determine whether or not it is worth it to replace the machine, the EAC of total costs must be compared at Year 4. Since , it is not worth it to replace the machine.

# Question 2

# Question 3

# Question 4

# Question 5