1.The intervals and corresponding frequencies are as follows. age frequency

1-5. 200

5-15 450

15-20 300

20-50 1500

50-80 700

80-110 44

Compute an approximate median value for the data:

PROGRAM:

age\_intervals <- c("1-5", "5-15", "15-20", "20-50", "50-80", "80-110")

frequencies <- c(200, 450, 300, 1500, 700, 44)

cumulative\_frequencies <- cumsum(frequencies)

N <- sum(frequencies)

median\_position <- N / 2

median\_class\_index <- which(cumulative\_frequencies >= median\_position)[1]

lower\_boundaries <- c(1, 5, 15, 20, 50, 80)

upper\_boundaries <- c(5, 15, 20, 50, 80, 110)

L <- lower\_boundaries[median\_class\_index]

CF <- ifelse(median\_class\_index == 1, 0, cumulative\_frequencies[median\_class\_index - 1])

f <- frequencies[median\_class\_index]

h <- upper\_boundaries[median\_class\_index] - lower\_boundaries[median\_class\_index]

median\_value <- L + ((median\_position - CF) / f) \* h

cat("Approximate Median:", median\_value, "\n")

OUTPUT

