

Problem 7.1

Problem 7.2

$2^{24}/2^{16} = 2^8$. The pointer would be 8 bits.

Problem 7.3

The probability that a segment is followed by a hole is .5. This means that the average number of holes must be half that of the number of segments.

Problem 7.5

pro The worst fit algorithm uses the largest chunks of memory first

con The largest chunks are gone if there is a particularly large process that needs to be placed

The average length of time for worst-fit search is n , where n is the number of memory blocks.

Problem 7.6

a 8 Megabytes

b 8 Megabytes

c Algorithms:

Best-Fit 29M

First-Fit 1M

Next-Fit 10M

Worst-Fit 1M

Problem 7.8

a 011011110100

b 011111100000

Problem 7.11

The preferable approach is to store the results in the instruction register. This will save processor cycles and memory space.

Problem 7.14

a $198 + 660 = 858$

b $156 + 222 = 378$

c $530 + 1752 = 2282$

d $444 + 996 = 1440$

e $222 + 660 = 882$