CS 427

HOMEWORK 3
BAKER, ALEX

Problem 1

open = {A(g=0, h=366, f=366)}
closed = {}

open = {S(g=140, h=253, f=393), T(g=118, h=329, f=447), Z(g=75, h=374, f=449)}
closed = {A}

open = {RV(g=140+80=220, h=193, f=413), F(g=140+99=239, h=176, f=415), T(g=118, h=329, f=447), Z(g=75, h=374, f=449)}
closed = {A, S}

open = {F(g=140+99=239, h176, f=415), P(g=140+80+97=317, h=100, f=417), T(g=118, h=329, f=447), Z(g=75, h=374, f=449), C(g=140+80+146=366, h=160, f=526)}
closed = {A, S, RV}

open = {P(g=140+80+97=317, h=100, f=417), B(g=140+99+211=450, h=0, f=450), T(g=118, h=329, f=447), Z(g=75, h=374, f=449), C(g=140+80+146=366, h=160, f=526)}
closed = {A, S, RV, F}

open = {B(g=140+80+91+101=412, h=0, f=412), B(g=140+99+211=450, h=0, f=450), T(g=118, h=329, f=447), Z(g=75, h=374, f=449), C(g=140+80+146=366, h=160, f=526)}
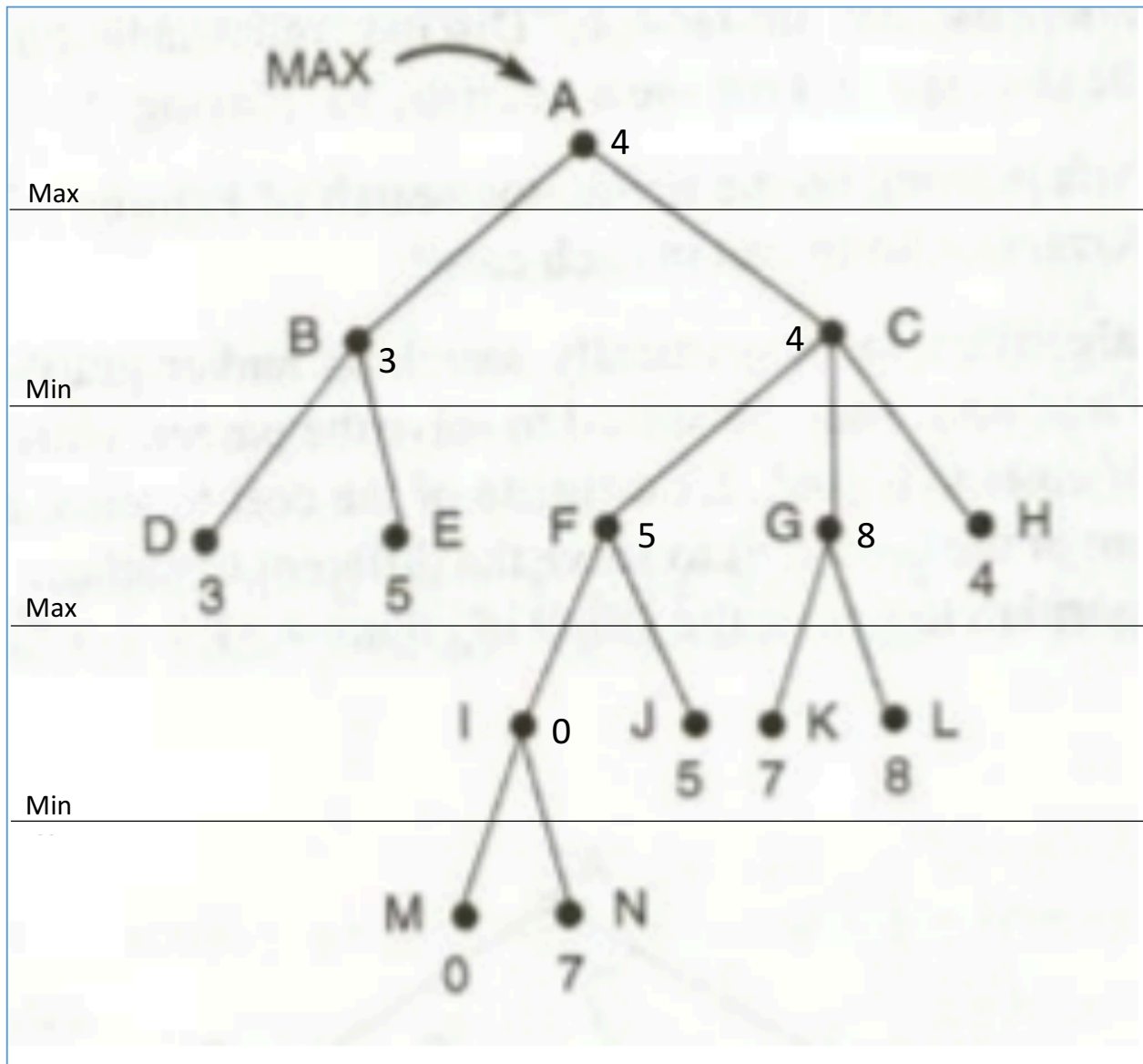closed = {A, S, RV, F, P}

open = {B(g=140+99+211=450, h=0, f=450), T(g=118, h=329, f=447), Z(g=75, h=374, f=449), C(g=140+80+146=366, h=160, f=526)}
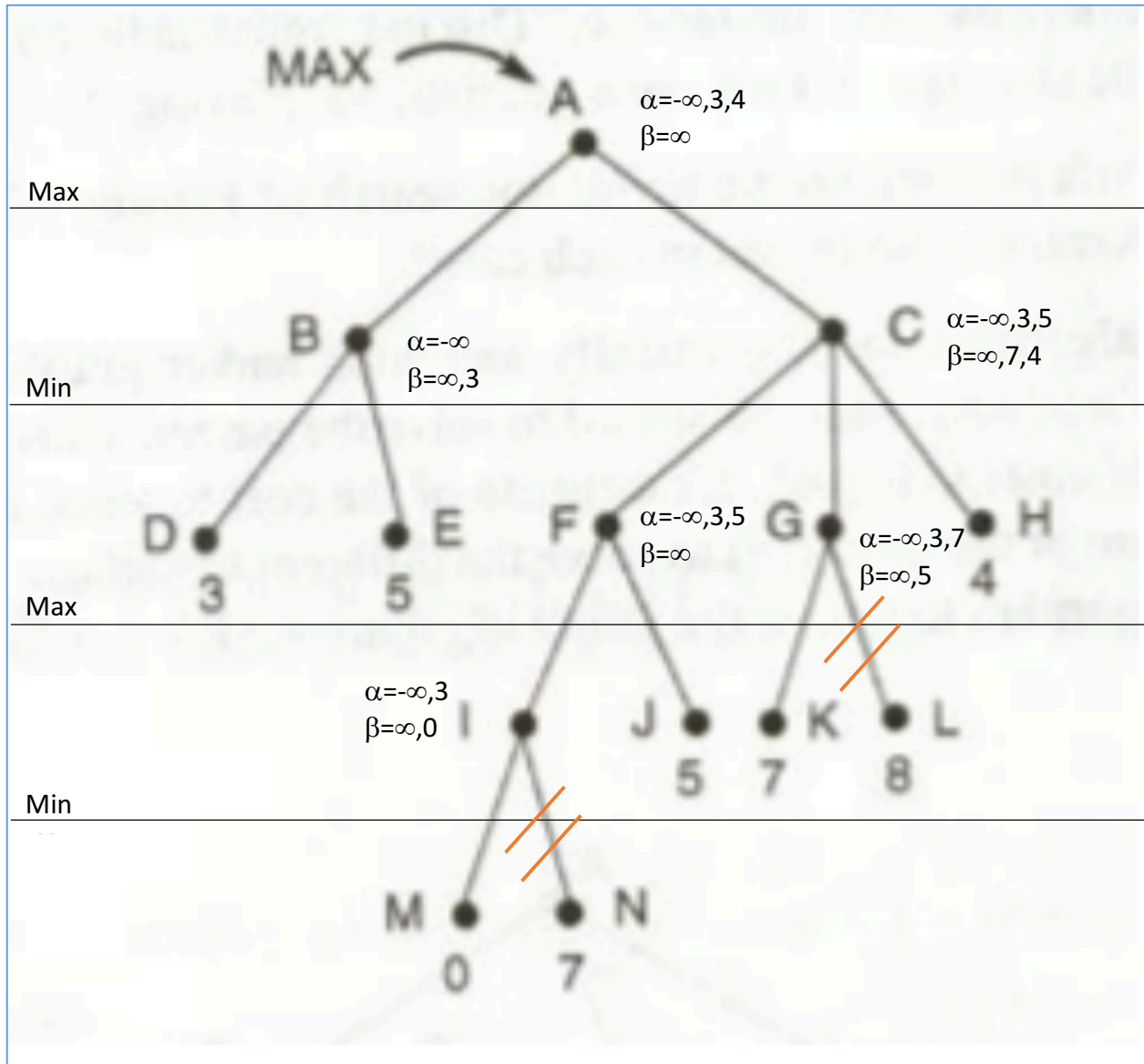closed = {A, S, RV, F, P, B}

Path = {A, S, RV, P, B}

Problem 2

Problem 3

MAX → A $\alpha = -\infty, 3, 4$ $\beta = \infty$

Max

B $\alpha = -\infty$ $\beta = \infty, 3$

C $\alpha = -\infty, 3, 5$ $\beta = \infty, 7, 4$

Min

D 3   E 5   F $\alpha = -\infty, 3, 5$ $\beta = \infty$ G $\alpha = -\infty, 3, 7$ $\beta = \infty, 5$ H 4

Max

$\alpha = -\infty, 3$ $\beta = \infty, 0$ I   J 5   K 7   L 8

Min

M 0   N 7

Problem 4

MAX ➜ A $\alpha=-\infty,4$ $\beta=\infty$

Max

B $\alpha=-\infty,4$ $\beta=\infty,5,3$

C $\alpha=-\infty$ $\beta=\infty,4$

Min

D • 3

E • 5

F • $\alpha=-\infty,5$ $\beta=\infty,4$

G • $\alpha=-\infty,8$ $\beta=\infty,12$

H • 4

Max

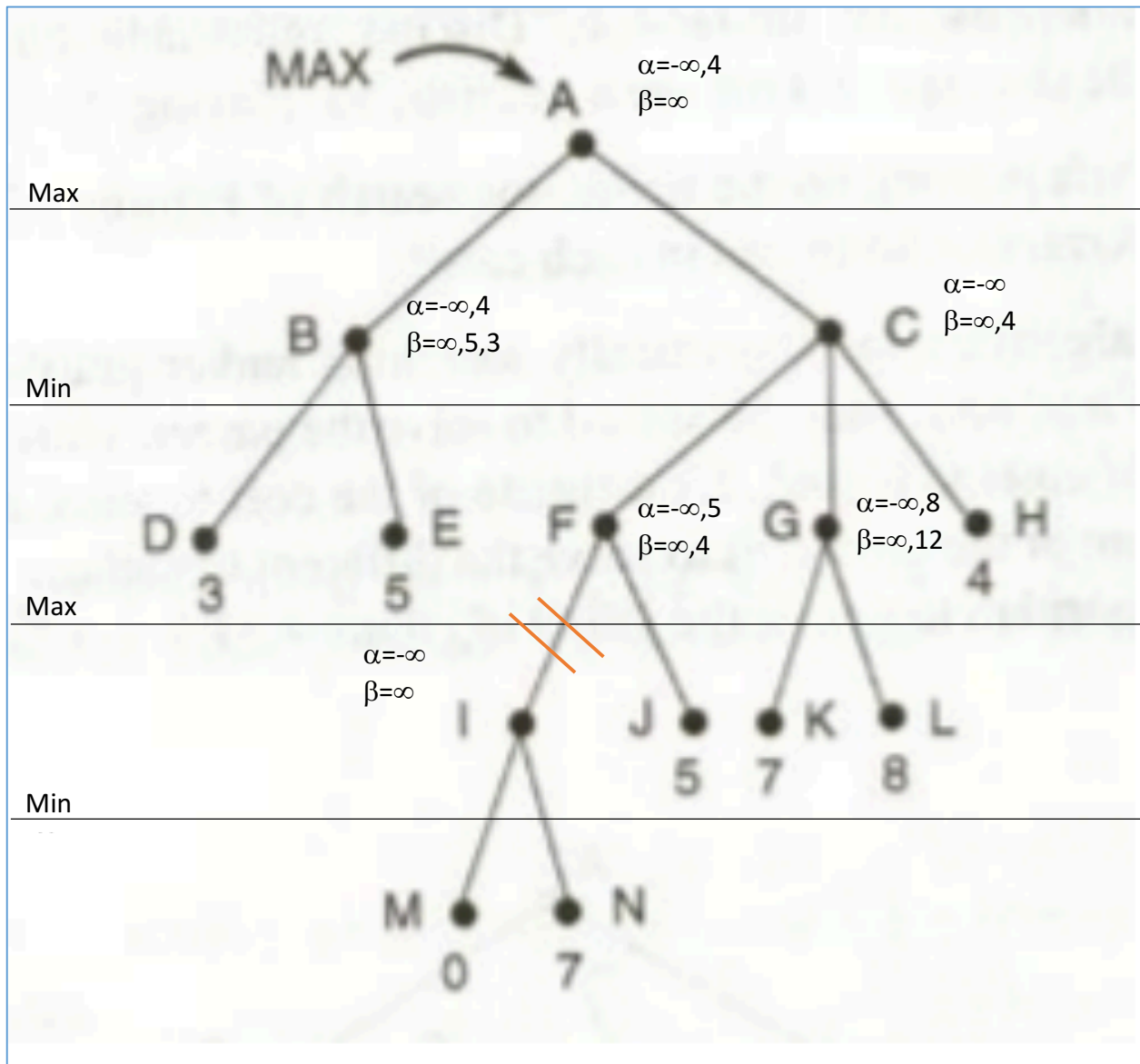$\alpha=-\infty$ $\beta=\infty$

I •

J • 5

K • 7

L • 8

Min

M • 0

N • 7

A different pruning occurs because the alpha and beta values differ when moving from left to right.