$$Q_{n+1}(x,y) := Q_0(x,y) + \frac{1}{2} \max\{Q_n(y,z) \mid arc_{=}(y,z)\}$$

$$Q_0(x,y) := \begin{cases} 4 & \text{if } x = y \in G \\ -\text{cost}(x,y) & \text{else if } arc(x,y) \end{cases}$$

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 $Q_0(x,y) := \begin{cases} 4 & \text{if } x = y \in G \\ -\cos t(x,y) & \text{else if } arc(x,y) \end{cases}$
 $Q_0(s,a) = -1 > Q_0(s,g) = -4$

From s, move to a or to g? n = 0: choose a

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$$Q_0(s,a) = -1 > Q_0(s,g) = -4$$

$$Q_1(s,a) = -1 + \frac{1}{2}Q_0(a,b) = -\frac{3}{2}$$

$$Q_1(s,g) = -4 + \frac{1}{2}Q_0(g,g) = -2$$

From s, move to a or to g?

n = 0: choose a

n=1: choose a

$$Q_{n+1}(x,y) := Q_0(x,y) + \frac{1}{2} \max\{Q_n(y,z) \mid arc_{=}(y,z)\}$$

$$Q_0(x,y) := \begin{cases} 4 & \text{if } x = y \in G \\ -\text{cost}(x,y) & \text{else if } arc(x,y) \end{cases}$$

$$Q_0(s,a) = -1 > Q_0(s,a)$$

$$Q_1(s,a) = -1 + \frac{1}{2}Q_0(a,a)$$

$$Q_1(s,g) = -4 + \frac{1}{2}Q_0(g,a)$$

$$Q_1(g,g) = 4 + \frac{1}{2}Q_0(g,a)$$

From
$$s$$
, move to a or to g ?
 $n = 0$: choose a
 $n = 1$: choose a
 $n = 2$: choose g

$$Q_0(s,a) = -1 > Q_0(s,g) = -4$$

$$Q_1(s,a) = -1 + \frac{1}{2}Q_0(a,b) = -\frac{3}{2}$$

 $Q_1(s,g) = -4 + \frac{1}{2}Q_0(g,g) = -2$

$$Q_1(a,b) = -1 + \frac{1}{2}Q_0(b,s) = -\frac{3}{2}$$

 $Q_1(g,g) = 4 + \frac{1}{2}Q_0(g,g) = 6$
 $Q_2(s,a) = -1 + \frac{1}{2}Q_1(a,b) = -\frac{7}{4}$

$$Q_2(s,a) = -1 + \frac{1}{2}Q_1(a,b) = -\frac{7}{4}$$

 $Q_2(s,g) = -4 + \frac{1}{2}Q_1(g,g) = -1$