

**3-14.** A system is described by the first-order difference equation

$$x(k+1) = [1 + a \Delta t]x(k) + b \Delta t u(k), \quad k = 0, 1, \dots, N-1,$$

and the performance measure

$$J = x^2(N) + \lambda \Delta t \sum_{k=0}^{N-1} u^2(k)$$

is to be minimized subject to the constraints

$$-1.0 \leq u(k) \leq 1.0, \quad k = 0, 1, \dots, N-1$$

and

$$0.0 \leq x(k) \leq 1.5, \quad k = 0, 1, \dots, N.$$

- (a) Use the dynamic programming algorithm to find the optimal control value(s) and minimum cost for each state value on the grid  $x(k) = 0.0, 0.02, \dots, 1.5$ . Assume quantization levels for the control of  $u(k) = -1.00, -0.98, \dots, 0.98, 1.00$ ; and assume  $a = 0.0$ ;  $\Delta t = 1.0$ ;  $b = 1.0$ ;  $\lambda = 2.0$ ;  $N = 2$ . (This is the same problem as considered in Section 3.5, but with a finer grid structure.)
- (b) Repeat part (a) with  $N = 3$ , i.e.,

$$J = x^2(3) + 2 \sum_{k=0}^2 u^2(k).$$

- (c) Repeat part (a) with  $\lambda = 4.0$ .
- (d) Repeat part (a) with  $\lambda = 0.5$ .

Figure 1: The decision tree illustration for Problem 1, part (i).

## Introduction: Algorithm Description

The algorithm developed in this assignment follows a dynamic programming approach to find the optimal solution to a multi-stage control problem. We know this problem can be solved via dynamic programming because the possible outcomes follow a tree structure where the optimal solution for all three stages necessarily involves finding the optimal path for each of the intermediate steps. This means any solutions to the intermediate steps can be tracked, then accessed very quickly if that solution is needed by the algorithm in the future.

The tree structure also means that a recursive implementation of the algorithm can be employed to solve problems with any number of steps. We know that for each stage in the optimization process, all possibilities from the current state to the end state need to be considered. We can think of this as the current state

”branching out” and spawning a number of possible solutions as we move towards the branches of the tree. Since the total cost is dependent on the sum of all intermediate costs, we can calculate the total cost by simply making a recursive call to our dynamic programming method. It is important to note that for each recursive call, we need to update a dictionary that stores what has been calculated thus far. This avoids the algorithm unnecessarily recalculating the same information many times over. Algorithm 1 shows the general process of the recursive process for solving the problem in this assignment via dynamic programming.

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**Algorithm 1:** Dynamic Programming Algorithm

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**Result:** A dictionary of minimum costs and optimal control values

**procedure** *getOptimum*( $x(k)$ ,  $u(k)$ ,  $N$ , *step*,  $\lambda$ ,  $J^*$ ,  $u(k)^*$ )

$bestCost \leftarrow \infty$

$bestU \leftarrow undefined$

$key \leftarrow (N - 1, x)$

**if**  $J^*$  contains *key* **then**

    | **return**  $J^*(key)$

**else**

    | *continue*

**end**

**for** each  $k$  **do**

$x(N + 1) \leftarrow x(N) + u(N)$

**if**  $N = 1$  **then**

        |  $J \leftarrow x(N + 1)^2 + \lambda u(N)^2$

**else**

        |  $J \leftarrow x(N + 1)^2 + getOptimum(x(k), u(k), N - 1, step, \lambda, J^*, u(k)^*)$

**end**

**if**  $cost \leq bestCost$  **then**

        |  $bestCost \leftarrow cost$

        |  $bestU \leftarrow U$

**else**

        | *continue*

**end**

**end**

$J^*(key) \leftarrow bestCost$

$u^*(key) \leftarrow bestU$

**return**  $J^*(key)$

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### **3-14 Part (a)**

Both the minimum cost and optimal control values for the problem were calculated for  $a = 0$ ,  $b = 0$ ,  $\Delta t = 1.0$ ,  $\lambda = 2$ , and  $N = 2$ . The list of all 264 values is quite long, so it is included in the appendix section. The values for the full path from 0 to 2 are listed first, followed by the intermediate values from 1 to 2.

### **3-14 Part (b)**

Both the minimum cost and optimal control values for the problem were calculated for  $a = 0$ ,  $b = 0$ ,  $\Delta t = 1.0$ ,  $\lambda = 2$ , and  $N = 3$ . The list of all 264 values is quite long, so it is included in the appendix section. The values for the full path from 0 to 3 are listed first, followed by the intermediate values from 1 to 3, then finally the values from 2 to 3.

### **3-14 Part (c)**

Both the minimum cost and optimal control values for the problem were calculated for  $a = 0$ ,  $b = 0$ ,  $\Delta t = 1.0$ ,  $\lambda = 4$ , and  $N = 2$ . The list of all 264 values is quite long, so it is included in the appendix section. The values for the full path from 0 to 2 are listed first, followed by the intermediate values from 1 to 2.

### **3-14 Part (d)**

Both the minimum cost and optimal control values for the problem were calculated for  $a = 0$ ,  $b = 0$ ,  $\Delta t = 1.0$ ,  $\lambda = 0.5$ , and  $N = 2$ . The list of all 264 values is quite long, so it is included in the appendix section. The values for the full path from 0 to 2 are listed first, followed by the intermediate values from 1 to 2.

### 3-16 Part (a)

Both the minimum cost and optimal control values for the problem were calculated for  $a = -0.4$ ,  $b = 0$ ,  $\Delta t = 1.0$ ,  $\lambda = 2$ , and  $N = 2$ . The list of all 264 values is quite long, so it is included in the appendix section. The values for the full path from 0 to 2 are listed first, followed by the intermediate values from 1 to 2.

### 3-16 Part (b)

Both the minimum cost and optimal control values for the problem were calculated for  $a = -0.4$ ,  $b = 0$ ,  $\Delta t = 1.0$ ,  $\lambda = 2$ , and  $N = 3$ . The list of all 264 values is quite long, so it is included in the appendix section. The values for the full path from 0 to 3 are listed first, followed by the intermediate values from 1 to 3, then finally the values from 2 to 3.

### 3-16 Part (c)

Both the minimum cost and optimal control values for the problem were calculated for  $a = -0.4$ ,  $b = 0$ ,  $\Delta t = 1.0$ ,  $\lambda = 4$ , and  $N = 2$ . The list of all 264 values is quite long, so it is included in the appendix section. The values for the full path from 0 to 2 are listed first, followed by the intermediate values from 1 to 2.

### 3-16 Part (d)

Both the minimum cost and optimal control values for the problem were calculated for  $a = -0.4$ ,  $b = 0$ ,  $\Delta t = 1.0$ ,  $\lambda = 0.5$ , and  $N = 2$ . The list of all 264 values is quite long, so it is included in the appendix section. The values for the full path from 0 to 2 are listed first, followed by the intermediate values from 1 to 2.

## Summary and Lessons Learned

This assignment provides a good example of an implementation of dynamic programming. The recursive nature of the problem along with its tree-like structure make dynamic programming a good choice to find a solution. The approach to solving the problem is very algorithmic, making it easy to adapt the method to new inputs. As such, moving from problem 3-14 to problem 3-16 was only a matter of changing the input values to the dynamic programming method. The structure of the problem also means that there are a large number of solutions to the problem. It becomes difficult to enumerate every optimal control value for the given grid, and would be incredibly tedious without the use of a computer.

There is a major lesson to be learned in the way of computational efficiency for this problem. We can easily see the effect that using dynamic programming has on the execution time of the program by simply disabling the dictionary that stores the previously found solutions. For the example in problem 3-16 part (b), the run time of program when dynamic programming is not used is 99.231 seconds. If dynamic programming is then re-enabled, the run time decreases drastically down to 0.981 seconds. By simply storing the values of previous solutions, we have improved an aspect of the solution by two orders of magnitude in this particular example.

A dynamic programming approach is practical for a problem on this scale. It ensures that an optimal solution is found for the problem at hand. It is however worth noting that dynamic programming does not scale well for large problem sizes. For NP-hard problems such as the travelling salesman, dynamic programming can quickly become computationally intractable. It goes to show that the choice for the solution method to an optimization problem can vary based on the use case.

### 3-14 Part (a)

|                           |                               |
|---------------------------|-------------------------------|
| $J_{02}^*(0.00) = 0.0000$ | $u^*(k)_{02}(0.00) = 0.0000$  |
| $J_{02}^*(0.02) = 0.0004$ | $u^*(k)_{02}(0.02) = 0.0000$  |
| $J_{02}^*(0.04) = 0.0012$ | $u^*(k)_{02}(0.04) = -0.0200$ |
| $J_{02}^*(0.06) = 0.0024$ | $u^*(k)_{02}(0.06) = -0.0200$ |
| $J_{02}^*(0.08) = 0.0044$ | $u^*(k)_{02}(0.08) = -0.0200$ |
| $J_{02}^*(0.10) = 0.0068$ | $u^*(k)_{02}(0.10) = -0.0400$ |
| $J_{02}^*(0.12) = 0.0096$ | $u^*(k)_{02}(0.12) = -0.0400$ |
| $J_{02}^*(0.14) = 0.0132$ | $u^*(k)_{02}(0.14) = -0.0400$ |
| $J_{02}^*(0.16) = 0.0172$ | $u^*(k)_{02}(0.16) = -0.0600$ |
| $J_{02}^*(0.18) = 0.0216$ | $u^*(k)_{02}(0.18) = -0.0600$ |
| $J_{02}^*(0.20) = 0.0268$ | $u^*(k)_{02}(0.20) = -0.0600$ |
| $J_{02}^*(0.22) = 0.0324$ | $u^*(k)_{02}(0.22) = -0.0800$ |
| $J_{02}^*(0.24) = 0.0384$ | $u^*(k)_{02}(0.24) = -0.0800$ |
| $J_{02}^*(0.26) = 0.0452$ | $u^*(k)_{02}(0.26) = -0.0800$ |
| $J_{02}^*(0.28) = 0.0524$ | $u^*(k)_{02}(0.28) = -0.1000$ |
| $J_{02}^*(0.30) = 0.0600$ | $u^*(k)_{02}(0.30) = -0.1000$ |
| $J_{02}^*(0.32) = 0.0684$ | $u^*(k)_{02}(0.32) = -0.1000$ |
| $J_{02}^*(0.34) = 0.0772$ | $u^*(k)_{02}(0.34) = -0.1200$ |
| $J_{02}^*(0.36) = 0.0864$ | $u^*(k)_{02}(0.36) = -0.1200$ |
| $J_{02}^*(0.38) = 0.0964$ | $u^*(k)_{02}(0.38) = -0.1200$ |
| $J_{02}^*(0.40) = 0.1068$ | $u^*(k)_{02}(0.40) = -0.1400$ |
| $J_{02}^*(0.42) = 0.1176$ | $u^*(k)_{02}(0.42) = -0.1400$ |
| $J_{02}^*(0.44) = 0.1292$ | $u^*(k)_{02}(0.44) = -0.1400$ |
| $J_{02}^*(0.46) = 0.1412$ | $u^*(k)_{02}(0.46) = -0.1600$ |
| $J_{02}^*(0.48) = 0.1536$ | $u^*(k)_{02}(0.48) = -0.1600$ |
| $J_{02}^*(0.50) = 0.1668$ | $u^*(k)_{02}(0.50) = -0.1600$ |
| $J_{02}^*(0.52) = 0.1804$ | $u^*(k)_{02}(0.52) = -0.1800$ |
| $J_{02}^*(0.54) = 0.1944$ | $u^*(k)_{02}(0.54) = -0.1800$ |
| $J_{02}^*(0.56) = 0.2092$ | $u^*(k)_{02}(0.56) = -0.1800$ |
| $J_{02}^*(0.58) = 0.2244$ | $u^*(k)_{02}(0.58) = -0.2000$ |
| $J_{02}^*(0.60) = 0.2400$ | $u^*(k)_{02}(0.60) = -0.2000$ |
| $J_{02}^*(0.62) = 0.2564$ | $u^*(k)_{02}(0.62) = -0.2000$ |
| $J_{02}^*(0.64) = 0.2732$ | $u^*(k)_{02}(0.64) = -0.2200$ |
| $J_{02}^*(0.66) = 0.2904$ | $u^*(k)_{02}(0.66) = -0.2200$ |
| $J_{02}^*(0.68) = 0.3084$ | $u^*(k)_{02}(0.68) = -0.2200$ |
| $J_{02}^*(0.70) = 0.3268$ | $u^*(k)_{02}(0.70) = -0.2400$ |
| $J_{02}^*(0.72) = 0.3456$ | $u^*(k)_{02}(0.72) = -0.2400$ |
| $J_{02}^*(0.74) = 0.3652$ | $u^*(k)_{02}(0.74) = -0.2400$ |
| $J_{02}^*(0.76) = 0.3852$ | $u^*(k)_{02}(0.76) = -0.2600$ |
| $J_{02}^*(0.78) = 0.4056$ | $u^*(k)_{02}(0.78) = -0.2600$ |
| $J_{02}^*(0.80) = 0.4268$ | $u^*(k)_{02}(0.80) = -0.2600$ |
| $J_{02}^*(0.82) = 0.4484$ | $u^*(k)_{02}(0.82) = -0.2800$ |
| $J_{02}^*(0.84) = 0.4704$ | $u^*(k)_{02}(0.84) = -0.2800$ |
| $J_{02}^*(0.86) = 0.4932$ | $u^*(k)_{02}(0.86) = -0.2800$ |
| $J_{02}^*(0.88) = 0.5164$ | $u^*(k)_{02}(0.88) = -0.3000$ |
| $J_{02}^*(0.90) = 0.5400$ | $u^*(k)_{02}(0.90) = -0.3000$ |
| $J_{02}^*(0.92) = 0.5644$ | $u^*(k)_{02}(0.92) = -0.3000$ |
| $J_{02}^*(0.94) = 0.5892$ | $u^*(k)_{02}(0.94) = -0.3200$ |
| $J_{02}^*(0.96) = 0.6144$ | $u^*(k)_{02}(0.96) = -0.3200$ |
| $J_{02}^*(0.98) = 0.6404$ | $u^*(k)_{02}(0.98) = -0.3200$ |
| $J_{02}^*(1.00) = 0.6668$ | $u^*(k)_{02}(1.00) = -0.3400$ |

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|---------------------------|-------------------------------|
| $J_{02}^*(1.02) = 0.6936$ | $u^*(k)_{02}(1.02) = -0.3400$ |
| $J_{02}^*(1.04) = 0.7212$ | $u^*(k)_{02}(1.04) = -0.3400$ |
| $J_{02}^*(1.06) = 0.7492$ | $u^*(k)_{02}(1.06) = -0.3600$ |
| $J_{02}^*(1.08) = 0.7776$ | $u^*(k)_{02}(1.08) = -0.3600$ |
| $J_{02}^*(1.10) = 0.8068$ | $u^*(k)_{02}(1.10) = -0.3600$ |
| $J_{02}^*(1.12) = 0.8364$ | $u^*(k)_{02}(1.12) = -0.3800$ |
| $J_{02}^*(1.14) = 0.8664$ | $u^*(k)_{02}(1.14) = -0.3800$ |
| $J_{02}^*(1.16) = 0.8972$ | $u^*(k)_{02}(1.16) = -0.3800$ |
| $J_{02}^*(1.18) = 0.9284$ | $u^*(k)_{02}(1.18) = -0.4000$ |
| $J_{02}^*(1.20) = 0.9600$ | $u^*(k)_{02}(1.20) = -0.4000$ |
| $J_{02}^*(1.22) = 0.9924$ | $u^*(k)_{02}(1.22) = -0.4000$ |
| $J_{02}^*(1.24) = 1.0252$ | $u^*(k)_{02}(1.24) = -0.4200$ |
| $J_{02}^*(1.26) = 1.0584$ | $u^*(k)_{02}(1.26) = -0.4200$ |
| $J_{02}^*(1.28) = 1.0924$ | $u^*(k)_{02}(1.28) = -0.4200$ |
| $J_{02}^*(1.30) = 1.1268$ | $u^*(k)_{02}(1.30) = -0.4400$ |
| $J_{02}^*(1.32) = 1.1616$ | $u^*(k)_{02}(1.32) = -0.4400$ |
| $J_{02}^*(1.34) = 1.1972$ | $u^*(k)_{02}(1.34) = -0.4400$ |
| $J_{02}^*(1.36) = 1.2332$ | $u^*(k)_{02}(1.36) = -0.4600$ |
| $J_{02}^*(1.38) = 1.2696$ | $u^*(k)_{02}(1.38) = -0.4600$ |
| $J_{02}^*(1.40) = 1.3068$ | $u^*(k)_{02}(1.40) = -0.4600$ |
| $J_{02}^*(1.42) = 1.3444$ | $u^*(k)_{02}(1.42) = -0.4800$ |
| $J_{02}^*(1.44) = 1.3824$ | $u^*(k)_{02}(1.44) = -0.4800$ |
| $J_{02}^*(1.46) = 1.4212$ | $u^*(k)_{02}(1.46) = -0.4800$ |
| $J_{02}^*(1.48) = 1.4604$ | $u^*(k)_{02}(1.48) = -0.5000$ |
| $J_{02}^*(1.50) = 1.5000$ | $u^*(k)_{02}(1.50) = -0.5000$ |
| $J_{12}^*(0.00) = 0.0000$ | $u^*(k)_{12}(0.00) = 0.0000$  |
| $J_{12}^*(0.02) = 0.0004$ | $u^*(k)_{12}(0.02) = 0.0000$  |
| $J_{12}^*(0.04) = 0.0012$ | $u^*(k)_{12}(0.04) = 0.0000$  |
| $J_{12}^*(0.06) = 0.0020$ | $u^*(k)_{12}(0.06) = -0.0200$ |
| $J_{12}^*(0.08) = 0.0032$ | $u^*(k)_{12}(0.08) = -0.0200$ |
| $J_{12}^*(0.10) = 0.0052$ | $u^*(k)_{12}(0.10) = -0.0200$ |
| $J_{12}^*(0.12) = 0.0076$ | $u^*(k)_{12}(0.12) = -0.0200$ |
| $J_{12}^*(0.14) = 0.0100$ | $u^*(k)_{12}(0.14) = -0.0400$ |
| $J_{12}^*(0.16) = 0.0128$ | $u^*(k)_{12}(0.16) = -0.0400$ |
| $J_{12}^*(0.18) = 0.0164$ | $u^*(k)_{12}(0.18) = -0.0400$ |
| $J_{12}^*(0.20) = 0.0204$ | $u^*(k)_{12}(0.20) = -0.0400$ |
| $J_{12}^*(0.22) = 0.0244$ | $u^*(k)_{12}(0.22) = -0.0600$ |
| $J_{12}^*(0.24) = 0.0288$ | $u^*(k)_{12}(0.24) = -0.0600$ |
| $J_{12}^*(0.26) = 0.0340$ | $u^*(k)_{12}(0.26) = -0.0600$ |
| $J_{12}^*(0.28) = 0.0396$ | $u^*(k)_{12}(0.28) = -0.0600$ |
| $J_{12}^*(0.30) = 0.0452$ | $u^*(k)_{12}(0.30) = -0.0800$ |
| $J_{12}^*(0.32) = 0.0512$ | $u^*(k)_{12}(0.32) = -0.0800$ |
| $J_{12}^*(0.34) = 0.0580$ | $u^*(k)_{12}(0.34) = -0.0800$ |
| $J_{12}^*(0.36) = 0.0652$ | $u^*(k)_{12}(0.36) = -0.0800$ |
| $J_{12}^*(0.38) = 0.0724$ | $u^*(k)_{12}(0.38) = -0.1000$ |
| $J_{12}^*(0.40) = 0.0800$ | $u^*(k)_{12}(0.40) = -0.1000$ |
| $J_{12}^*(0.42) = 0.0884$ | $u^*(k)_{12}(0.42) = -0.1000$ |
| $J_{12}^*(0.44) = 0.0972$ | $u^*(k)_{12}(0.44) = -0.1000$ |
| $J_{12}^*(0.46) = 0.1060$ | $u^*(k)_{12}(0.46) = -0.1200$ |
| $J_{12}^*(0.48) = 0.1152$ | $u^*(k)_{12}(0.48) = -0.1200$ |
| $J_{12}^*(0.50) = 0.1252$ | $u^*(k)_{12}(0.50) = -0.1200$ |
| $J_{12}^*(0.52) = 0.1356$ | $u^*(k)_{12}(0.52) = -0.1200$ |
| $J_{12}^*(0.54) = 0.1460$ | $u^*(k)_{12}(0.54) = -0.1400$ |
| $J_{12}^*(0.56) = 0.1568$ | $u^*(k)_{12}(0.56) = -0.1400$ |

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|---------------------------|-------------------------------|
| $J_{12}^*(0.58) = 0.1684$ | $u^*(k)_{12}(0.58) = -0.1400$ |
| $J_{12}^*(0.60) = 0.1804$ | $u^*(k)_{12}(0.60) = -0.1400$ |
| $J_{12}^*(0.62) = 0.1924$ | $u^*(k)_{12}(0.62) = -0.1600$ |
| $J_{12}^*(0.64) = 0.2048$ | $u^*(k)_{12}(0.64) = -0.1600$ |
| $J_{12}^*(0.66) = 0.2180$ | $u^*(k)_{12}(0.66) = -0.1600$ |
| $J_{12}^*(0.68) = 0.2316$ | $u^*(k)_{12}(0.68) = -0.1600$ |
| $J_{12}^*(0.70) = 0.2452$ | $u^*(k)_{12}(0.70) = -0.1800$ |
| $J_{12}^*(0.72) = 0.2592$ | $u^*(k)_{12}(0.72) = -0.1800$ |
| $J_{12}^*(0.74) = 0.2740$ | $u^*(k)_{12}(0.74) = -0.1800$ |
| $J_{12}^*(0.76) = 0.2892$ | $u^*(k)_{12}(0.76) = -0.1800$ |
| $J_{12}^*(0.78) = 0.3044$ | $u^*(k)_{12}(0.78) = -0.2000$ |
| $J_{12}^*(0.80) = 0.3200$ | $u^*(k)_{12}(0.80) = -0.2000$ |
| $J_{12}^*(0.82) = 0.3364$ | $u^*(k)_{12}(0.82) = -0.2000$ |
| $J_{12}^*(0.84) = 0.3532$ | $u^*(k)_{12}(0.84) = -0.2000$ |
| $J_{12}^*(0.86) = 0.3700$ | $u^*(k)_{12}(0.86) = -0.2200$ |
| $J_{12}^*(0.88) = 0.3872$ | $u^*(k)_{12}(0.88) = -0.2200$ |
| $J_{12}^*(0.90) = 0.4052$ | $u^*(k)_{12}(0.90) = -0.2200$ |
| $J_{12}^*(0.92) = 0.4236$ | $u^*(k)_{12}(0.92) = -0.2200$ |
| $J_{12}^*(0.94) = 0.4420$ | $u^*(k)_{12}(0.94) = -0.2400$ |
| $J_{12}^*(0.96) = 0.4608$ | $u^*(k)_{12}(0.96) = -0.2400$ |
| $J_{12}^*(0.98) = 0.4804$ | $u^*(k)_{12}(0.98) = -0.2400$ |
| $J_{12}^*(1.00) = 0.5004$ | $u^*(k)_{12}(1.00) = -0.2400$ |
| $J_{12}^*(1.02) = 0.5204$ | $u^*(k)_{12}(1.02) = -0.2600$ |
| $J_{12}^*(1.04) = 0.5408$ | $u^*(k)_{12}(1.04) = -0.2600$ |
| $J_{12}^*(1.06) = 0.5620$ | $u^*(k)_{12}(1.06) = -0.2600$ |
| $J_{12}^*(1.08) = 0.5836$ | $u^*(k)_{12}(1.08) = -0.2600$ |
| $J_{12}^*(1.10) = 0.6052$ | $u^*(k)_{12}(1.10) = -0.2800$ |
| $J_{12}^*(1.12) = 0.6272$ | $u^*(k)_{12}(1.12) = -0.2800$ |
| $J_{12}^*(1.14) = 0.6500$ | $u^*(k)_{12}(1.14) = -0.2800$ |
| $J_{12}^*(1.16) = 0.6732$ | $u^*(k)_{12}(1.16) = -0.2800$ |
| $J_{12}^*(1.18) = 0.6964$ | $u^*(k)_{12}(1.18) = -0.3000$ |
| $J_{12}^*(1.20) = 0.7200$ | $u^*(k)_{12}(1.20) = -0.3000$ |
| $J_{12}^*(1.22) = 0.7444$ | $u^*(k)_{12}(1.22) = -0.3000$ |
| $J_{12}^*(1.24) = 0.7692$ | $u^*(k)_{12}(1.24) = -0.3200$ |
| $J_{12}^*(1.26) = 0.7940$ | $u^*(k)_{12}(1.26) = -0.3200$ |
| $J_{12}^*(1.28) = 0.8192$ | $u^*(k)_{12}(1.28) = -0.3200$ |
| $J_{12}^*(1.30) = 0.8452$ | $u^*(k)_{12}(1.30) = -0.3200$ |
| $J_{12}^*(1.32) = 0.8716$ | $u^*(k)_{12}(1.32) = -0.3200$ |
| $J_{12}^*(1.34) = 0.8980$ | $u^*(k)_{12}(1.34) = -0.3400$ |
| $J_{12}^*(1.36) = 0.9248$ | $u^*(k)_{12}(1.36) = -0.3400$ |
| $J_{12}^*(1.38) = 0.9524$ | $u^*(k)_{12}(1.38) = -0.3400$ |
| $J_{12}^*(1.40) = 0.9804$ | $u^*(k)_{12}(1.40) = -0.3400$ |
| $J_{12}^*(1.42) = 1.0084$ | $u^*(k)_{12}(1.42) = -0.3600$ |
| $J_{12}^*(1.44) = 1.0368$ | $u^*(k)_{12}(1.44) = -0.3600$ |
| $J_{12}^*(1.46) = 1.0660$ | $u^*(k)_{12}(1.46) = -0.3600$ |
| $J_{12}^*(1.48) = 1.0956$ | $u^*(k)_{12}(1.48) = -0.3600$ |
| $J_{12}^*(1.50) = 1.1252$ | $u^*(k)_{12}(1.50) = -0.3800$ |

### 3-14 Part(b)

|                           |                               |
|---------------------------|-------------------------------|
| $J_{03}^*(0.00) = 0.0000$ | $u^*(k)_{02}(0.00) = 0.0000$  |
| $J_{03}^*(0.02) = 0.0004$ | $u^*(k)_{02}(0.02) = 0.0000$  |
| $J_{03}^*(0.04) = 0.0012$ | $u^*(k)_{02}(0.04) = -0.0200$ |
| $J_{03}^*(0.06) = 0.0024$ | $u^*(k)_{02}(0.06) = -0.0200$ |



|                           |                               |
|---------------------------|-------------------------------|
| $J_{03}^*(0.08) = 0.0044$ | $u^*(k)_{02}(0.08) = -0.0200$ |
| $J_{03}^*(0.10) = 0.0068$ | $u^*(k)_{02}(0.10) = -0.0400$ |
| $J_{03}^*(0.12) = 0.0096$ | $u^*(k)_{02}(0.12) = -0.0400$ |
| $J_{03}^*(0.14) = 0.0132$ | $u^*(k)_{02}(0.14) = -0.0400$ |
| $J_{03}^*(0.16) = 0.0172$ | $u^*(k)_{02}(0.16) = -0.0600$ |
| $J_{03}^*(0.18) = 0.0216$ | $u^*(k)_{02}(0.18) = -0.0600$ |
| $J_{03}^*(0.20) = 0.0268$ | $u^*(k)_{02}(0.20) = -0.0600$ |
| $J_{03}^*(0.22) = 0.0324$ | $u^*(k)_{02}(0.22) = -0.0800$ |
| $J_{03}^*(0.24) = 0.0384$ | $u^*(k)_{02}(0.24) = -0.0800$ |
| $J_{03}^*(0.26) = 0.0452$ | $u^*(k)_{02}(0.26) = -0.0800$ |
| $J_{03}^*(0.28) = 0.0524$ | $u^*(k)_{02}(0.28) = -0.1000$ |
| $J_{03}^*(0.30) = 0.0600$ | $u^*(k)_{02}(0.30) = -0.1000$ |
| $J_{03}^*(0.32) = 0.0684$ | $u^*(k)_{02}(0.32) = -0.1000$ |
| $J_{03}^*(0.34) = 0.0772$ | $u^*(k)_{02}(0.34) = -0.1200$ |
| $J_{03}^*(0.36) = 0.0864$ | $u^*(k)_{02}(0.36) = -0.1200$ |
| $J_{03}^*(0.38) = 0.0964$ | $u^*(k)_{02}(0.38) = -0.1200$ |
| $J_{03}^*(0.40) = 0.1068$ | $u^*(k)_{02}(0.40) = -0.1400$ |
| $J_{03}^*(0.42) = 0.1176$ | $u^*(k)_{02}(0.42) = -0.1400$ |
| $J_{03}^*(0.44) = 0.1292$ | $u^*(k)_{02}(0.44) = -0.1400$ |
| $J_{03}^*(0.46) = 0.1412$ | $u^*(k)_{02}(0.46) = -0.1600$ |
| $J_{03}^*(0.48) = 0.1536$ | $u^*(k)_{02}(0.48) = -0.1600$ |
| $J_{03}^*(0.50) = 0.1668$ | $u^*(k)_{02}(0.50) = -0.1600$ |
| $J_{03}^*(0.52) = 0.1804$ | $u^*(k)_{02}(0.52) = -0.1800$ |
| $J_{03}^*(0.54) = 0.1944$ | $u^*(k)_{02}(0.54) = -0.1800$ |
| $J_{03}^*(0.56) = 0.2092$ | $u^*(k)_{02}(0.56) = -0.1800$ |
| $J_{03}^*(0.58) = 0.2244$ | $u^*(k)_{02}(0.58) = -0.2000$ |
| $J_{03}^*(0.60) = 0.2400$ | $u^*(k)_{02}(0.60) = -0.2000$ |
| $J_{03}^*(0.62) = 0.2564$ | $u^*(k)_{02}(0.62) = -0.2000$ |
| $J_{03}^*(0.64) = 0.2732$ | $u^*(k)_{02}(0.64) = -0.2200$ |
| $J_{03}^*(0.66) = 0.2904$ | $u^*(k)_{02}(0.66) = -0.2200$ |
| $J_{03}^*(0.68) = 0.3084$ | $u^*(k)_{02}(0.68) = -0.2200$ |
| $J_{03}^*(0.70) = 0.3268$ | $u^*(k)_{02}(0.70) = -0.2400$ |
| $J_{03}^*(0.72) = 0.3456$ | $u^*(k)_{02}(0.72) = -0.2400$ |
| $J_{03}^*(0.74) = 0.3652$ | $u^*(k)_{02}(0.74) = -0.2400$ |
| $J_{03}^*(0.76) = 0.3852$ | $u^*(k)_{02}(0.76) = -0.2600$ |
| $J_{03}^*(0.78) = 0.4056$ | $u^*(k)_{02}(0.78) = -0.2600$ |
| $J_{03}^*(0.80) = 0.4268$ | $u^*(k)_{02}(0.80) = -0.2600$ |
| $J_{03}^*(0.82) = 0.4484$ | $u^*(k)_{02}(0.82) = -0.2800$ |
| $J_{03}^*(0.84) = 0.4704$ | $u^*(k)_{02}(0.84) = -0.2800$ |
| $J_{03}^*(0.86) = 0.4932$ | $u^*(k)_{02}(0.86) = -0.2800$ |
| $J_{03}^*(0.88) = 0.5164$ | $u^*(k)_{02}(0.88) = -0.3000$ |
| $J_{03}^*(0.90) = 0.5400$ | $u^*(k)_{02}(0.90) = -0.3000$ |
| $J_{03}^*(0.92) = 0.5644$ | $u^*(k)_{02}(0.92) = -0.3000$ |
| $J_{03}^*(0.94) = 0.5892$ | $u^*(k)_{02}(0.94) = -0.3200$ |
| $J_{03}^*(0.96) = 0.6144$ | $u^*(k)_{02}(0.96) = -0.3200$ |
| $J_{03}^*(0.98) = 0.6404$ | $u^*(k)_{02}(0.98) = -0.3200$ |
| $J_{03}^*(1.00) = 0.6668$ | $u^*(k)_{02}(1.00) = -0.3400$ |
| $J_{03}^*(1.02) = 0.6936$ | $u^*(k)_{02}(1.02) = -0.3400$ |
| $J_{03}^*(1.04) = 0.7212$ | $u^*(k)_{02}(1.04) = -0.3400$ |
| $J_{03}^*(1.06) = 0.7492$ | $u^*(k)_{02}(1.06) = -0.3600$ |
| $J_{03}^*(1.08) = 0.7776$ | $u^*(k)_{02}(1.08) = -0.3600$ |
| $J_{03}^*(1.10) = 0.8068$ | $u^*(k)_{02}(1.10) = -0.3600$ |
| $J_{03}^*(1.12) = 0.8364$ | $u^*(k)_{02}(1.12) = -0.3800$ |
| $J_{03}^*(1.14) = 0.8664$ | $u^*(k)_{02}(1.14) = -0.3800$ |

|                           |                               |
|---------------------------|-------------------------------|
| $J_{03}^*(1.16) = 0.8972$ | $u^*(k)_{02}(1.16) = -0.3800$ |
| $J_{03}^*(1.18) = 0.9284$ | $u^*(k)_{02}(1.18) = -0.4000$ |
| $J_{03}^*(1.20) = 0.9600$ | $u^*(k)_{02}(1.20) = -0.4000$ |
| $J_{03}^*(1.22) = 0.9924$ | $u^*(k)_{02}(1.22) = -0.4000$ |
| $J_{03}^*(1.24) = 1.0252$ | $u^*(k)_{02}(1.24) = -0.4200$ |
| $J_{03}^*(1.26) = 1.0584$ | $u^*(k)_{02}(1.26) = -0.4200$ |
| $J_{03}^*(1.28) = 1.0924$ | $u^*(k)_{02}(1.28) = -0.4200$ |
| $J_{03}^*(1.30) = 1.1268$ | $u^*(k)_{02}(1.30) = -0.4400$ |
| $J_{03}^*(1.32) = 1.1616$ | $u^*(k)_{02}(1.32) = -0.4400$ |
| $J_{03}^*(1.34) = 1.1972$ | $u^*(k)_{02}(1.34) = -0.4400$ |
| $J_{03}^*(1.36) = 1.2332$ | $u^*(k)_{02}(1.36) = -0.4600$ |
| $J_{03}^*(1.38) = 1.2696$ | $u^*(k)_{02}(1.38) = -0.4600$ |
| $J_{03}^*(1.40) = 1.3068$ | $u^*(k)_{02}(1.40) = -0.4600$ |
| $J_{03}^*(1.42) = 1.3444$ | $u^*(k)_{02}(1.42) = -0.4800$ |
| $J_{03}^*(1.44) = 1.3824$ | $u^*(k)_{02}(1.44) = -0.4800$ |
| $J_{03}^*(1.46) = 1.4212$ | $u^*(k)_{02}(1.46) = -0.4800$ |
| $J_{03}^*(1.48) = 1.4604$ | $u^*(k)_{02}(1.48) = -0.5000$ |
| $J_{03}^*(1.50) = 1.5000$ | $u^*(k)_{02}(1.50) = -0.5000$ |
| $J_{13}^*(0.00) = 0.0000$ | $u^*(k)_{13}(0.00) = 0.0000$  |
| $J_{13}^*(0.02) = 0.0004$ | $u^*(k)_{13}(0.02) = 0.0000$  |
| $J_{13}^*(0.04) = 0.0012$ | $u^*(k)_{13}(0.04) = 0.0000$  |
| $J_{13}^*(0.06) = 0.0020$ | $u^*(k)_{13}(0.06) = -0.0200$ |
| $J_{13}^*(0.08) = 0.0032$ | $u^*(k)_{13}(0.08) = -0.0200$ |
| $J_{13}^*(0.10) = 0.0052$ | $u^*(k)_{13}(0.10) = -0.0200$ |
| $J_{13}^*(0.12) = 0.0076$ | $u^*(k)_{13}(0.12) = -0.0200$ |
| $J_{13}^*(0.14) = 0.0100$ | $u^*(k)_{13}(0.14) = -0.0400$ |
| $J_{13}^*(0.16) = 0.0128$ | $u^*(k)_{13}(0.16) = -0.0400$ |
| $J_{13}^*(0.18) = 0.0164$ | $u^*(k)_{13}(0.18) = -0.0400$ |
| $J_{13}^*(0.20) = 0.0204$ | $u^*(k)_{13}(0.20) = -0.0400$ |
| $J_{13}^*(0.22) = 0.0244$ | $u^*(k)_{13}(0.22) = -0.0600$ |
| $J_{13}^*(0.24) = 0.0288$ | $u^*(k)_{13}(0.24) = -0.0600$ |
| $J_{13}^*(0.26) = 0.0340$ | $u^*(k)_{13}(0.26) = -0.0600$ |
| $J_{13}^*(0.28) = 0.0396$ | $u^*(k)_{13}(0.28) = -0.0600$ |
| $J_{13}^*(0.30) = 0.0452$ | $u^*(k)_{13}(0.30) = -0.0800$ |
| $J_{13}^*(0.32) = 0.0512$ | $u^*(k)_{13}(0.32) = -0.0800$ |
| $J_{13}^*(0.34) = 0.0580$ | $u^*(k)_{13}(0.34) = -0.0800$ |
| $J_{13}^*(0.36) = 0.0652$ | $u^*(k)_{13}(0.36) = -0.0800$ |
| $J_{13}^*(0.38) = 0.0724$ | $u^*(k)_{13}(0.38) = -0.1000$ |
| $J_{13}^*(0.40) = 0.0800$ | $u^*(k)_{13}(0.40) = -0.1000$ |
| $J_{13}^*(0.42) = 0.0884$ | $u^*(k)_{13}(0.42) = -0.1000$ |
| $J_{13}^*(0.44) = 0.0972$ | $u^*(k)_{13}(0.44) = -0.1000$ |
| $J_{13}^*(0.46) = 0.1060$ | $u^*(k)_{13}(0.46) = -0.1200$ |
| $J_{13}^*(0.48) = 0.1152$ | $u^*(k)_{13}(0.48) = -0.1200$ |
| $J_{13}^*(0.50) = 0.1252$ | $u^*(k)_{13}(0.50) = -0.1200$ |
| $J_{13}^*(0.52) = 0.1356$ | $u^*(k)_{13}(0.52) = -0.1400$ |
| $J_{13}^*(0.54) = 0.1460$ | $u^*(k)_{13}(0.54) = -0.1400$ |
| $J_{13}^*(0.56) = 0.1568$ | $u^*(k)_{13}(0.56) = -0.1400$ |
| $J_{13}^*(0.58) = 0.1684$ | $u^*(k)_{13}(0.58) = -0.1400$ |
| $J_{13}^*(0.60) = 0.1804$ | $u^*(k)_{13}(0.60) = -0.1400$ |
| $J_{13}^*(0.62) = 0.1924$ | $u^*(k)_{13}(0.62) = -0.1600$ |
| $J_{13}^*(0.64) = 0.2048$ | $u^*(k)_{13}(0.64) = -0.1600$ |
| $J_{13}^*(0.66) = 0.2180$ | $u^*(k)_{13}(0.66) = -0.1600$ |
| $J_{13}^*(0.68) = 0.2316$ | $u^*(k)_{13}(0.68) = -0.1600$ |
| $J_{13}^*(0.70) = 0.2452$ | $u^*(k)_{13}(0.70) = -0.1800$ |

|                           |                               |
|---------------------------|-------------------------------|
| $J_{13}^*(0.72) = 0.2592$ | $u^*(k)_{13}(0.72) = -0.1800$ |
| $J_{13}^*(0.74) = 0.2740$ | $u^*(k)_{13}(0.74) = -0.1800$ |
| $J_{13}^*(0.76) = 0.2892$ | $u^*(k)_{13}(0.76) = -0.1800$ |
| $J_{13}^*(0.78) = 0.3044$ | $u^*(k)_{13}(0.78) = -0.2000$ |
| $J_{13}^*(0.80) = 0.3200$ | $u^*(k)_{13}(0.80) = -0.2000$ |
| $J_{13}^*(0.82) = 0.3364$ | $u^*(k)_{13}(0.82) = -0.2000$ |
| $J_{13}^*(0.84) = 0.3532$ | $u^*(k)_{13}(0.84) = -0.2200$ |
| $J_{13}^*(0.86) = 0.3700$ | $u^*(k)_{13}(0.86) = -0.2200$ |
| $J_{13}^*(0.88) = 0.3872$ | $u^*(k)_{13}(0.88) = -0.2200$ |
| $J_{13}^*(0.90) = 0.4052$ | $u^*(k)_{13}(0.90) = -0.2200$ |
| $J_{13}^*(0.92) = 0.4236$ | $u^*(k)_{13}(0.92) = -0.2200$ |
| $J_{13}^*(0.94) = 0.4420$ | $u^*(k)_{13}(0.94) = -0.2400$ |
| $J_{13}^*(0.96) = 0.4608$ | $u^*(k)_{13}(0.96) = -0.2400$ |
| $J_{13}^*(0.98) = 0.4804$ | $u^*(k)_{13}(0.98) = -0.2400$ |
| $J_{13}^*(1.00) = 0.5004$ | $u^*(k)_{13}(1.00) = -0.2400$ |
| $J_{13}^*(1.02) = 0.5204$ | $u^*(k)_{13}(1.02) = -0.2600$ |
| $J_{13}^*(1.04) = 0.5408$ | $u^*(k)_{13}(1.04) = -0.2600$ |
| $J_{13}^*(1.06) = 0.5620$ | $u^*(k)_{13}(1.06) = -0.2600$ |
| $J_{13}^*(1.08) = 0.5836$ | $u^*(k)_{13}(1.08) = -0.2600$ |
| $J_{13}^*(1.10) = 0.6052$ | $u^*(k)_{13}(1.10) = -0.2800$ |
| $J_{13}^*(1.12) = 0.6272$ | $u^*(k)_{13}(1.12) = -0.2800$ |
| $J_{13}^*(1.14) = 0.6500$ | $u^*(k)_{13}(1.14) = -0.2800$ |
| $J_{13}^*(1.16) = 0.6732$ | $u^*(k)_{13}(1.16) = -0.2800$ |
| $J_{13}^*(1.18) = 0.6964$ | $u^*(k)_{13}(1.18) = -0.3000$ |
| $J_{13}^*(1.20) = 0.7200$ | $u^*(k)_{13}(1.20) = -0.3000$ |
| $J_{13}^*(1.22) = 0.7444$ | $u^*(k)_{13}(1.22) = -0.3000$ |
| $J_{13}^*(1.24) = 0.7692$ | $u^*(k)_{13}(1.24) = -0.3000$ |
| $J_{13}^*(1.26) = 0.7940$ | $u^*(k)_{13}(1.26) = -0.3200$ |
| $J_{13}^*(1.28) = 0.8192$ | $u^*(k)_{13}(1.28) = -0.3200$ |
| $J_{13}^*(1.30) = 0.8452$ | $u^*(k)_{13}(1.30) = -0.3200$ |
| $J_{13}^*(1.32) = 0.8716$ | $u^*(k)_{13}(1.32) = -0.3200$ |
| $J_{13}^*(1.34) = 0.8980$ | $u^*(k)_{13}(1.34) = -0.3400$ |
| $J_{13}^*(1.36) = 0.9248$ | $u^*(k)_{13}(1.36) = -0.3400$ |
| $J_{13}^*(1.38) = 0.9524$ | $u^*(k)_{13}(1.38) = -0.3400$ |
| $J_{13}^*(1.40) = 0.9804$ | $u^*(k)_{13}(1.40) = -0.3400$ |
| $J_{13}^*(1.42) = 1.0084$ | $u^*(k)_{13}(1.42) = -0.3600$ |
| $J_{13}^*(1.44) = 1.0368$ | $u^*(k)_{13}(1.44) = -0.3600$ |
| $J_{13}^*(1.46) = 1.0660$ | $u^*(k)_{13}(1.46) = -0.3600$ |
| $J_{13}^*(1.48) = 1.0956$ | $u^*(k)_{13}(1.48) = -0.3600$ |
| $J_{13}^*(1.50) = 1.1252$ | $u^*(k)_{13}(1.50) = -0.3800$ |
| $J_{23}^*(0.00) = 0.0000$ | $u^*(k)_{23}(0.00) = 0.0000$  |
| $J_{23}^*(0.02) = 0.0004$ | $u^*(k)_{23}(0.02) = 0.0000$  |
| $J_{23}^*(0.04) = 0.0012$ | $u^*(k)_{23}(0.04) = 0.0000$  |
| $J_{23}^*(0.06) = 0.0020$ | $u^*(k)_{23}(0.06) = 0.0000$  |
| $J_{23}^*(0.08) = 0.0028$ | $u^*(k)_{23}(0.08) = -0.0200$ |
| $J_{23}^*(0.10) = 0.0040$ | $u^*(k)_{23}(0.10) = -0.0200$ |
| $J_{23}^*(0.12) = 0.0060$ | $u^*(k)_{23}(0.12) = -0.0200$ |
| $J_{23}^*(0.14) = 0.0084$ | $u^*(k)_{23}(0.14) = -0.0200$ |
| $J_{23}^*(0.16) = 0.0108$ | $u^*(k)_{23}(0.16) = -0.0400$ |
| $J_{23}^*(0.18) = 0.0132$ | $u^*(k)_{23}(0.18) = -0.0400$ |
| $J_{23}^*(0.20) = 0.0160$ | $u^*(k)_{23}(0.20) = -0.0400$ |
| $J_{23}^*(0.22) = 0.0196$ | $u^*(k)_{23}(0.22) = -0.0400$ |
| $J_{23}^*(0.24) = 0.0236$ | $u^*(k)_{23}(0.24) = -0.0400$ |
| $J_{23}^*(0.26) = 0.0276$ | $u^*(k)_{23}(0.26) = -0.0400$ |

|                           |                               |
|---------------------------|-------------------------------|
| $J_{23}^*(0.28) = 0.0316$ | $u^*(k)_{23}(0.28) = -0.0600$ |
| $J_{23}^*(0.30) = 0.0360$ | $u^*(k)_{23}(0.30) = -0.0600$ |
| $J_{23}^*(0.32) = 0.0412$ | $u^*(k)_{23}(0.32) = -0.0600$ |
| $J_{23}^*(0.34) = 0.0468$ | $u^*(k)_{23}(0.34) = -0.0600$ |
| $J_{23}^*(0.36) = 0.0524$ | $u^*(k)_{23}(0.36) = -0.0600$ |
| $J_{23}^*(0.38) = 0.0580$ | $u^*(k)_{23}(0.38) = -0.0800$ |
| $J_{23}^*(0.40) = 0.0640$ | $u^*(k)_{23}(0.40) = -0.0800$ |
| $J_{23}^*(0.42) = 0.0708$ | $u^*(k)_{23}(0.42) = -0.0800$ |
| $J_{23}^*(0.44) = 0.0780$ | $u^*(k)_{23}(0.44) = -0.0800$ |
| $J_{23}^*(0.46) = 0.0852$ | $u^*(k)_{23}(0.46) = -0.0800$ |
| $J_{23}^*(0.48) = 0.0924$ | $u^*(k)_{23}(0.48) = -0.1000$ |
| $J_{23}^*(0.50) = 0.1000$ | $u^*(k)_{23}(0.50) = -0.1000$ |
| $J_{23}^*(0.52) = 0.1084$ | $u^*(k)_{23}(0.52) = -0.1000$ |
| $J_{23}^*(0.54) = 0.1172$ | $u^*(k)_{23}(0.54) = -0.1000$ |
| $J_{23}^*(0.56) = 0.1260$ | $u^*(k)_{23}(0.56) = -0.1000$ |
| $J_{23}^*(0.58) = 0.1348$ | $u^*(k)_{23}(0.58) = -0.1200$ |
| $J_{23}^*(0.60) = 0.1440$ | $u^*(k)_{23}(0.60) = -0.1200$ |
| $J_{23}^*(0.62) = 0.1540$ | $u^*(k)_{23}(0.62) = -0.1200$ |
| $J_{23}^*(0.64) = 0.1644$ | $u^*(k)_{23}(0.64) = -0.1200$ |
| $J_{23}^*(0.66) = 0.1748$ | $u^*(k)_{23}(0.66) = -0.1400$ |
| $J_{23}^*(0.68) = 0.1852$ | $u^*(k)_{23}(0.68) = -0.1400$ |
| $J_{23}^*(0.70) = 0.1960$ | $u^*(k)_{23}(0.70) = -0.1400$ |
| $J_{23}^*(0.72) = 0.2076$ | $u^*(k)_{23}(0.72) = -0.1400$ |
| $J_{23}^*(0.74) = 0.2196$ | $u^*(k)_{23}(0.74) = -0.1400$ |
| $J_{23}^*(0.76) = 0.2316$ | $u^*(k)_{23}(0.76) = -0.1400$ |
| $J_{23}^*(0.78) = 0.2436$ | $u^*(k)_{23}(0.78) = -0.1600$ |
| $J_{23}^*(0.80) = 0.2560$ | $u^*(k)_{23}(0.80) = -0.1600$ |
| $J_{23}^*(0.82) = 0.2692$ | $u^*(k)_{23}(0.82) = -0.1600$ |
| $J_{23}^*(0.84) = 0.2828$ | $u^*(k)_{23}(0.84) = -0.1600$ |
| $J_{23}^*(0.86) = 0.2964$ | $u^*(k)_{23}(0.86) = -0.1600$ |
| $J_{23}^*(0.88) = 0.3100$ | $u^*(k)_{23}(0.88) = -0.1800$ |
| $J_{23}^*(0.90) = 0.3240$ | $u^*(k)_{23}(0.90) = -0.1800$ |
| $J_{23}^*(0.92) = 0.3388$ | $u^*(k)_{23}(0.92) = -0.1800$ |
| $J_{23}^*(0.94) = 0.3540$ | $u^*(k)_{23}(0.94) = -0.1800$ |
| $J_{23}^*(0.96) = 0.3692$ | $u^*(k)_{23}(0.96) = -0.1800$ |
| $J_{23}^*(0.98) = 0.3844$ | $u^*(k)_{23}(0.98) = -0.2000$ |
| $J_{23}^*(1.00) = 0.4000$ | $u^*(k)_{23}(1.00) = -0.2000$ |
| $J_{23}^*(1.02) = 0.4164$ | $u^*(k)_{23}(1.02) = -0.2000$ |
| $J_{23}^*(1.04) = 0.4332$ | $u^*(k)_{23}(1.04) = -0.2200$ |
| $J_{23}^*(1.06) = 0.4500$ | $u^*(k)_{23}(1.06) = -0.2000$ |
| $J_{23}^*(1.08) = 0.4668$ | $u^*(k)_{23}(1.08) = -0.2200$ |
| $J_{23}^*(1.10) = 0.4840$ | $u^*(k)_{23}(1.10) = -0.2200$ |
| $J_{23}^*(1.12) = 0.5020$ | $u^*(k)_{23}(1.12) = -0.2200$ |
| $J_{23}^*(1.14) = 0.5204$ | $u^*(k)_{23}(1.14) = -0.2200$ |
| $J_{23}^*(1.16) = 0.5388$ | $u^*(k)_{23}(1.16) = -0.2200$ |
| $J_{23}^*(1.18) = 0.5572$ | $u^*(k)_{23}(1.18) = -0.2400$ |
| $J_{23}^*(1.20) = 0.5760$ | $u^*(k)_{23}(1.20) = -0.2400$ |
| $J_{23}^*(1.22) = 0.5956$ | $u^*(k)_{23}(1.22) = -0.2400$ |
| $J_{23}^*(1.24) = 0.6156$ | $u^*(k)_{23}(1.24) = -0.2400$ |
| $J_{23}^*(1.26) = 0.6356$ | $u^*(k)_{23}(1.26) = -0.2400$ |
| $J_{23}^*(1.28) = 0.6556$ | $u^*(k)_{23}(1.28) = -0.2600$ |
| $J_{23}^*(1.30) = 0.6760$ | $u^*(k)_{23}(1.30) = -0.2600$ |
| $J_{23}^*(1.32) = 0.6972$ | $u^*(k)_{23}(1.32) = -0.2600$ |
| $J_{23}^*(1.34) = 0.7188$ | $u^*(k)_{23}(1.34) = -0.2600$ |

|                           |                               |
|---------------------------|-------------------------------|
| $J_{23}^*(1.36) = 0.7404$ | $u^*(k)_{23}(1.36) = -0.2600$ |
| $J_{23}^*(1.38) = 0.7620$ | $u^*(k)_{23}(1.38) = -0.2800$ |
| $J_{23}^*(1.40) = 0.7840$ | $u^*(k)_{23}(1.40) = -0.2800$ |
| $J_{23}^*(1.42) = 0.8068$ | $u^*(k)_{23}(1.42) = -0.2800$ |
| $J_{23}^*(1.44) = 0.8300$ | $u^*(k)_{23}(1.44) = -0.2800$ |
| $J_{23}^*(1.46) = 0.8532$ | $u^*(k)_{23}(1.46) = -0.2800$ |
| $J_{23}^*(1.48) = 0.8764$ | $u^*(k)_{23}(1.48) = -0.3000$ |
| $J_{23}^*(1.50) = 0.9000$ | $u^*(k)_{23}(1.50) = -0.3000$ |

### 3-14 Part (c)

|                           |                               |
|---------------------------|-------------------------------|
| $J_{02}^*(0.00) = 0.0000$ | $u^*(k)_{02}(0.00) = 0.0000$  |
| $J_{02}^*(0.02) = 0.0004$ | $u^*(k)_{02}(0.02) = 0.0000$  |
| $J_{02}^*(0.04) = 0.0016$ | $u^*(k)_{02}(0.04) = 0.0000$  |
| $J_{02}^*(0.06) = 0.0032$ | $u^*(k)_{02}(0.06) = -0.0200$ |
| $J_{02}^*(0.08) = 0.0052$ | $u^*(k)_{02}(0.08) = -0.0200$ |
| $J_{02}^*(0.10) = 0.0080$ | $u^*(k)_{02}(0.10) = -0.0200$ |
| $J_{02}^*(0.12) = 0.0116$ | $u^*(k)_{02}(0.12) = -0.0200$ |
| $J_{02}^*(0.14) = 0.0160$ | $u^*(k)_{02}(0.14) = -0.0200$ |
| $J_{02}^*(0.16) = 0.0208$ | $u^*(k)_{02}(0.16) = -0.0400$ |
| $J_{02}^*(0.18) = 0.0260$ | $u^*(k)_{02}(0.18) = -0.0400$ |
| $J_{02}^*(0.20) = 0.0320$ | $u^*(k)_{02}(0.20) = -0.0400$ |
| $J_{02}^*(0.22) = 0.0388$ | $u^*(k)_{02}(0.22) = -0.0400$ |
| $J_{02}^*(0.24) = 0.0464$ | $u^*(k)_{02}(0.24) = -0.0400$ |
| $J_{02}^*(0.26) = 0.0544$ | $u^*(k)_{02}(0.26) = -0.0600$ |
| $J_{02}^*(0.28) = 0.0628$ | $u^*(k)_{02}(0.28) = -0.0600$ |
| $J_{02}^*(0.30) = 0.0720$ | $u^*(k)_{02}(0.30) = -0.0600$ |
| $J_{02}^*(0.32) = 0.0820$ | $u^*(k)_{02}(0.32) = -0.0600$ |
| $J_{02}^*(0.34) = 0.0928$ | $u^*(k)_{02}(0.34) = -0.0600$ |
| $J_{02}^*(0.36) = 0.1040$ | $u^*(k)_{02}(0.36) = -0.0800$ |
| $J_{02}^*(0.38) = 0.1156$ | $u^*(k)_{02}(0.38) = -0.0800$ |
| $J_{02}^*(0.40) = 0.1280$ | $u^*(k)_{02}(0.40) = -0.0800$ |
| $J_{02}^*(0.42) = 0.1412$ | $u^*(k)_{02}(0.42) = -0.0800$ |
| $J_{02}^*(0.44) = 0.1552$ | $u^*(k)_{02}(0.44) = -0.0800$ |
| $J_{02}^*(0.46) = 0.1696$ | $u^*(k)_{02}(0.46) = -0.1000$ |
| $J_{02}^*(0.48) = 0.1844$ | $u^*(k)_{02}(0.48) = -0.1000$ |
| $J_{02}^*(0.50) = 0.2000$ | $u^*(k)_{02}(0.50) = -0.1000$ |
| $J_{02}^*(0.52) = 0.2164$ | $u^*(k)_{02}(0.52) = -0.1000$ |
| $J_{02}^*(0.54) = 0.2336$ | $u^*(k)_{02}(0.54) = -0.1000$ |
| $J_{02}^*(0.56) = 0.2512$ | $u^*(k)_{02}(0.56) = -0.1200$ |
| $J_{02}^*(0.58) = 0.2692$ | $u^*(k)_{02}(0.58) = -0.1200$ |
| $J_{02}^*(0.60) = 0.2880$ | $u^*(k)_{02}(0.60) = -0.1200$ |
| $J_{02}^*(0.62) = 0.3076$ | $u^*(k)_{02}(0.62) = -0.1200$ |
| $J_{02}^*(0.64) = 0.3280$ | $u^*(k)_{02}(0.64) = -0.1200$ |
| $J_{02}^*(0.66) = 0.3488$ | $u^*(k)_{02}(0.66) = -0.1400$ |
| $J_{02}^*(0.68) = 0.3700$ | $u^*(k)_{02}(0.68) = -0.1400$ |
| $J_{02}^*(0.70) = 0.3920$ | $u^*(k)_{02}(0.70) = -0.1400$ |
| $J_{02}^*(0.72) = 0.4148$ | $u^*(k)_{02}(0.72) = -0.1400$ |
| $J_{02}^*(0.74) = 0.4384$ | $u^*(k)_{02}(0.74) = -0.1400$ |
| $J_{02}^*(0.76) = 0.4624$ | $u^*(k)_{02}(0.76) = -0.1600$ |
| $J_{02}^*(0.78) = 0.4868$ | $u^*(k)_{02}(0.78) = -0.1600$ |
| $J_{02}^*(0.80) = 0.5120$ | $u^*(k)_{02}(0.80) = -0.1600$ |
| $J_{02}^*(0.82) = 0.5380$ | $u^*(k)_{02}(0.82) = -0.1600$ |
| $J_{02}^*(0.84) = 0.5648$ | $u^*(k)_{02}(0.84) = -0.1600$ |

|                           |                               |
|---------------------------|-------------------------------|
| $J_{02}^*(0.86) = 0.5920$ | $u^*(k)_{02}(0.86) = -0.1800$ |
| $J_{02}^*(0.88) = 0.6196$ | $u^*(k)_{02}(0.88) = -0.1800$ |
| $J_{02}^*(0.90) = 0.6480$ | $u^*(k)_{02}(0.90) = -0.1800$ |
| $J_{02}^*(0.92) = 0.6772$ | $u^*(k)_{02}(0.92) = -0.1800$ |
| $J_{02}^*(0.94) = 0.7072$ | $u^*(k)_{02}(0.94) = -0.1800$ |
| $J_{02}^*(0.96) = 0.7376$ | $u^*(k)_{02}(0.96) = -0.2000$ |
| $J_{02}^*(0.98) = 0.7684$ | $u^*(k)_{02}(0.98) = -0.2000$ |
| $J_{02}^*(1.00) = 0.8000$ | $u^*(k)_{02}(1.00) = -0.2000$ |
| $J_{02}^*(1.02) = 0.8324$ | $u^*(k)_{02}(1.02) = -0.2000$ |
| $J_{02}^*(1.04) = 0.8656$ | $u^*(k)_{02}(1.04) = -0.2000$ |
| $J_{02}^*(1.06) = 0.8992$ | $u^*(k)_{02}(1.06) = -0.2200$ |
| $J_{02}^*(1.08) = 0.9332$ | $u^*(k)_{02}(1.08) = -0.2200$ |
| $J_{02}^*(1.10) = 0.9680$ | $u^*(k)_{02}(1.10) = -0.2200$ |
| $J_{02}^*(1.12) = 1.0036$ | $u^*(k)_{02}(1.12) = -0.2200$ |
| $J_{02}^*(1.14) = 1.0400$ | $u^*(k)_{02}(1.14) = -0.2200$ |
| $J_{02}^*(1.16) = 1.0768$ | $u^*(k)_{02}(1.16) = -0.2400$ |
| $J_{02}^*(1.18) = 1.1140$ | $u^*(k)_{02}(1.18) = -0.2400$ |
| $J_{02}^*(1.20) = 1.1520$ | $u^*(k)_{02}(1.20) = -0.2400$ |
| $J_{02}^*(1.22) = 1.1908$ | $u^*(k)_{02}(1.22) = -0.2400$ |
| $J_{02}^*(1.24) = 1.2304$ | $u^*(k)_{02}(1.24) = -0.2400$ |
| $J_{02}^*(1.26) = 1.2704$ | $u^*(k)_{02}(1.26) = -0.2600$ |
| $J_{02}^*(1.28) = 1.3108$ | $u^*(k)_{02}(1.28) = -0.2600$ |
| $J_{02}^*(1.30) = 1.3520$ | $u^*(k)_{02}(1.30) = -0.2600$ |
| $J_{02}^*(1.32) = 1.3940$ | $u^*(k)_{02}(1.32) = -0.2600$ |
| $J_{02}^*(1.34) = 1.4368$ | $u^*(k)_{02}(1.34) = -0.2600$ |
| $J_{02}^*(1.36) = 1.4800$ | $u^*(k)_{02}(1.36) = -0.2800$ |
| $J_{02}^*(1.38) = 1.5236$ | $u^*(k)_{02}(1.38) = -0.2800$ |
| $J_{02}^*(1.40) = 1.5680$ | $u^*(k)_{02}(1.40) = -0.2800$ |
| $J_{02}^*(1.42) = 1.6132$ | $u^*(k)_{02}(1.42) = -0.2800$ |
| $J_{02}^*(1.44) = 1.6592$ | $u^*(k)_{02}(1.44) = -0.2800$ |
| $J_{02}^*(1.46) = 1.7056$ | $u^*(k)_{02}(1.46) = -0.3000$ |
| $J_{02}^*(1.48) = 1.7524$ | $u^*(k)_{02}(1.48) = -0.3000$ |
| $J_{02}^*(1.50) = 1.8000$ | $u^*(k)_{02}(1.50) = -0.3000$ |
| $J_{12}^*(0.00) = 0.0000$ | $u^*(k)_{13}(0.00) = 0.0000$  |
| $J_{12}^*(0.02) = 0.0004$ | $u^*(k)_{13}(0.02) = 0.0000$  |
| $J_{12}^*(0.04) = 0.0016$ | $u^*(k)_{13}(0.04) = 0.0000$  |
| $J_{12}^*(0.06) = 0.0032$ | $u^*(k)_{13}(0.06) = 0.0000$  |
| $J_{12}^*(0.08) = 0.0048$ | $u^*(k)_{13}(0.08) = -0.0200$ |
| $J_{12}^*(0.10) = 0.0068$ | $u^*(k)_{13}(0.10) = -0.0200$ |
| $J_{12}^*(0.12) = 0.0096$ | $u^*(k)_{13}(0.12) = -0.0200$ |
| $J_{12}^*(0.14) = 0.0132$ | $u^*(k)_{13}(0.14) = -0.0200$ |
| $J_{12}^*(0.16) = 0.0176$ | $u^*(k)_{13}(0.16) = -0.0200$ |
| $J_{12}^*(0.18) = 0.0224$ | $u^*(k)_{13}(0.18) = -0.0400$ |
| $J_{12}^*(0.20) = 0.0272$ | $u^*(k)_{13}(0.20) = -0.0400$ |
| $J_{12}^*(0.22) = 0.0324$ | $u^*(k)_{13}(0.22) = -0.0400$ |
| $J_{12}^*(0.24) = 0.0384$ | $u^*(k)_{13}(0.24) = -0.0400$ |
| $J_{12}^*(0.26) = 0.0452$ | $u^*(k)_{13}(0.26) = -0.0400$ |
| $J_{12}^*(0.28) = 0.0528$ | $u^*(k)_{13}(0.28) = -0.0400$ |
| $J_{12}^*(0.30) = 0.0608$ | $u^*(k)_{13}(0.30) = -0.0400$ |
| $J_{12}^*(0.32) = 0.0688$ | $u^*(k)_{13}(0.32) = -0.0600$ |
| $J_{12}^*(0.34) = 0.0772$ | $u^*(k)_{13}(0.34) = -0.0600$ |
| $J_{12}^*(0.36) = 0.0864$ | $u^*(k)_{13}(0.36) = -0.0600$ |
| $J_{12}^*(0.38) = 0.0964$ | $u^*(k)_{13}(0.38) = -0.0600$ |
| $J_{12}^*(0.40) = 0.1072$ | $u^*(k)_{13}(0.40) = -0.0600$ |

|                           |                               |
|---------------------------|-------------------------------|
| $J_{12}^*(0.42) = 0.1184$ | $u^*(k)_{13}(0.42) = -0.0800$ |
| $J_{12}^*(0.44) = 0.1296$ | $u^*(k)_{13}(0.44) = -0.0800$ |
| $J_{12}^*(0.46) = 0.1412$ | $u^*(k)_{13}(0.46) = -0.0800$ |
| $J_{12}^*(0.48) = 0.1536$ | $u^*(k)_{13}(0.48) = -0.0800$ |
| $J_{12}^*(0.50) = 0.1668$ | $u^*(k)_{13}(0.50) = -0.0800$ |
| $J_{12}^*(0.52) = 0.1808$ | $u^*(k)_{13}(0.52) = -0.0800$ |
| $J_{12}^*(0.54) = 0.1952$ | $u^*(k)_{13}(0.54) = -0.0800$ |
| $J_{12}^*(0.56) = 0.2096$ | $u^*(k)_{13}(0.56) = -0.1000$ |
| $J_{12}^*(0.58) = 0.2244$ | $u^*(k)_{13}(0.58) = -0.1000$ |
| $J_{12}^*(0.60) = 0.2400$ | $u^*(k)_{13}(0.60) = -0.1000$ |
| $J_{12}^*(0.62) = 0.2564$ | $u^*(k)_{13}(0.62) = -0.1000$ |
| $J_{12}^*(0.64) = 0.2736$ | $u^*(k)_{13}(0.64) = -0.1000$ |
| $J_{12}^*(0.66) = 0.2912$ | $u^*(k)_{13}(0.66) = -0.1000$ |
| $J_{12}^*(0.68) = 0.3088$ | $u^*(k)_{13}(0.68) = -0.1200$ |
| $J_{12}^*(0.70) = 0.3268$ | $u^*(k)_{13}(0.70) = -0.1200$ |
| $J_{12}^*(0.72) = 0.3456$ | $u^*(k)_{13}(0.72) = -0.1200$ |
| $J_{12}^*(0.74) = 0.3652$ | $u^*(k)_{13}(0.74) = -0.1200$ |
| $J_{12}^*(0.76) = 0.3856$ | $u^*(k)_{13}(0.76) = -0.1200$ |
| $J_{12}^*(0.78) = 0.4064$ | $u^*(k)_{13}(0.78) = -0.1200$ |
| $J_{12}^*(0.80) = 0.4272$ | $u^*(k)_{13}(0.80) = -0.1400$ |
| $J_{12}^*(0.82) = 0.4484$ | $u^*(k)_{13}(0.82) = -0.1400$ |
| $J_{12}^*(0.84) = 0.4704$ | $u^*(k)_{13}(0.84) = -0.1400$ |
| $J_{12}^*(0.86) = 0.4932$ | $u^*(k)_{13}(0.86) = -0.1400$ |
| $J_{12}^*(0.88) = 0.5168$ | $u^*(k)_{13}(0.88) = -0.1400$ |
| $J_{12}^*(0.90) = 0.5408$ | $u^*(k)_{13}(0.90) = -0.1400$ |
| $J_{12}^*(0.92) = 0.5648$ | $u^*(k)_{13}(0.92) = -0.1600$ |
| $J_{12}^*(0.94) = 0.5892$ | $u^*(k)_{13}(0.94) = -0.1600$ |
| $J_{12}^*(0.96) = 0.6144$ | $u^*(k)_{13}(0.96) = -0.1600$ |
| $J_{12}^*(0.98) = 0.6404$ | $u^*(k)_{13}(0.98) = -0.1600$ |
| $J_{12}^*(1.00) = 0.6672$ | $u^*(k)_{13}(1.00) = -0.1600$ |
| $J_{12}^*(1.02) = 0.6944$ | $u^*(k)_{13}(1.02) = -0.1600$ |
| $J_{12}^*(1.04) = 0.7216$ | $u^*(k)_{13}(1.04) = -0.1800$ |
| $J_{12}^*(1.06) = 0.7492$ | $u^*(k)_{13}(1.06) = -0.1800$ |
| $J_{12}^*(1.08) = 0.7776$ | $u^*(k)_{13}(1.08) = -0.1800$ |
| $J_{12}^*(1.10) = 0.8068$ | $u^*(k)_{13}(1.10) = -0.1800$ |
| $J_{12}^*(1.12) = 0.8368$ | $u^*(k)_{13}(1.12) = -0.1800$ |
| $J_{12}^*(1.14) = 0.8672$ | $u^*(k)_{13}(1.14) = -0.2000$ |
| $J_{12}^*(1.16) = 0.8976$ | $u^*(k)_{13}(1.16) = -0.2000$ |
| $J_{12}^*(1.18) = 0.9284$ | $u^*(k)_{13}(1.18) = -0.2000$ |
| $J_{12}^*(1.20) = 0.9600$ | $u^*(k)_{13}(1.20) = -0.2000$ |
| $J_{12}^*(1.22) = 0.9924$ | $u^*(k)_{13}(1.22) = -0.2000$ |
| $J_{12}^*(1.24) = 1.0256$ | $u^*(k)_{13}(1.24) = -0.2000$ |
| $J_{12}^*(1.26) = 1.0592$ | $u^*(k)_{13}(1.26) = -0.2000$ |
| $J_{12}^*(1.28) = 1.0928$ | $u^*(k)_{13}(1.28) = -0.2200$ |
| $J_{12}^*(1.30) = 1.1268$ | $u^*(k)_{13}(1.30) = -0.2200$ |
| $J_{12}^*(1.32) = 1.1616$ | $u^*(k)_{13}(1.32) = -0.2200$ |
| $J_{12}^*(1.34) = 1.1972$ | $u^*(k)_{13}(1.34) = -0.2200$ |
| $J_{12}^*(1.36) = 1.2336$ | $u^*(k)_{13}(1.36) = -0.2200$ |
| $J_{12}^*(1.38) = 1.2704$ | $u^*(k)_{13}(1.38) = -0.2200$ |
| $J_{12}^*(1.40) = 1.3072$ | $u^*(k)_{13}(1.40) = -0.2400$ |
| $J_{12}^*(1.42) = 1.3444$ | $u^*(k)_{13}(1.42) = -0.2400$ |
| $J_{12}^*(1.44) = 1.3824$ | $u^*(k)_{13}(1.44) = -0.2400$ |
| $J_{12}^*(1.46) = 1.4212$ | $u^*(k)_{13}(1.46) = -0.2400$ |
| $J_{12}^*(1.48) = 1.4608$ | $u^*(k)_{13}(1.48) = -0.2400$ |

$$J_{12}^*(1.50) = 1.5008 \quad u^*(k)_{13}(1.50) = -0.2400$$

### 3-14 Part (d)

|                           |                               |
|---------------------------|-------------------------------|
| $J_{02}^*(0.00) = 0.0000$ | $u^*(k)_{02}(0.00) = 0.0000$  |
| $J_{02}^*(0.02) = 0.0002$ | $u^*(k)_{02}(0.02) = -0.0200$ |
| $J_{02}^*(0.04) = 0.0006$ | $u^*(k)_{02}(0.04) = -0.0200$ |
| $J_{02}^*(0.06) = 0.0012$ | $u^*(k)_{02}(0.06) = -0.0400$ |
| $J_{02}^*(0.08) = 0.0022$ | $u^*(k)_{02}(0.08) = -0.0600$ |
| $J_{02}^*(0.10) = 0.0034$ | $u^*(k)_{02}(0.10) = -0.0600$ |
| $J_{02}^*(0.12) = 0.0048$ | $u^*(k)_{02}(0.12) = -0.0800$ |
| $J_{02}^*(0.14) = 0.0066$ | $u^*(k)_{02}(0.14) = -0.1000$ |
| $J_{02}^*(0.16) = 0.0086$ | $u^*(k)_{02}(0.16) = -0.1000$ |
| $J_{02}^*(0.18) = 0.0108$ | $u^*(k)_{02}(0.18) = -0.1200$ |
| $J_{02}^*(0.20) = 0.0134$ | $u^*(k)_{02}(0.20) = -0.1400$ |
| $J_{02}^*(0.22) = 0.0162$ | $u^*(k)_{02}(0.22) = -0.1400$ |
| $J_{02}^*(0.24) = 0.0192$ | $u^*(k)_{02}(0.24) = -0.1600$ |
| $J_{02}^*(0.26) = 0.0226$ | $u^*(k)_{02}(0.26) = -0.1800$ |
| $J_{02}^*(0.28) = 0.0262$ | $u^*(k)_{02}(0.28) = -0.1800$ |
| $J_{02}^*(0.30) = 0.0300$ | $u^*(k)_{02}(0.30) = -0.2000$ |
| $J_{02}^*(0.32) = 0.0342$ | $u^*(k)_{02}(0.32) = -0.2200$ |
| $J_{02}^*(0.34) = 0.0386$ | $u^*(k)_{02}(0.34) = -0.2200$ |
| $J_{02}^*(0.36) = 0.0432$ | $u^*(k)_{02}(0.36) = -0.2400$ |
| $J_{02}^*(0.38) = 0.0482$ | $u^*(k)_{02}(0.38) = -0.2600$ |
| $J_{02}^*(0.40) = 0.0534$ | $u^*(k)_{02}(0.40) = -0.2600$ |
| $J_{02}^*(0.42) = 0.0588$ | $u^*(k)_{02}(0.42) = -0.2800$ |
| $J_{02}^*(0.44) = 0.0646$ | $u^*(k)_{02}(0.44) = -0.3000$ |
| $J_{02}^*(0.46) = 0.0706$ | $u^*(k)_{02}(0.46) = -0.3000$ |
| $J_{02}^*(0.48) = 0.0768$ | $u^*(k)_{02}(0.48) = -0.3200$ |
| $J_{02}^*(0.50) = 0.0834$ | $u^*(k)_{02}(0.50) = -0.3400$ |
| $J_{02}^*(0.52) = 0.0902$ | $u^*(k)_{02}(0.52) = -0.3400$ |
| $J_{02}^*(0.54) = 0.0972$ | $u^*(k)_{02}(0.54) = -0.3600$ |
| $J_{02}^*(0.56) = 0.1046$ | $u^*(k)_{02}(0.56) = -0.3800$ |
| $J_{02}^*(0.58) = 0.1122$ | $u^*(k)_{02}(0.58) = -0.3800$ |
| $J_{02}^*(0.60) = 0.1200$ | $u^*(k)_{02}(0.60) = -0.4000$ |
| $J_{02}^*(0.62) = 0.1282$ | $u^*(k)_{02}(0.62) = -0.4200$ |
| $J_{02}^*(0.64) = 0.1366$ | $u^*(k)_{02}(0.64) = -0.4200$ |
| $J_{02}^*(0.66) = 0.1452$ | $u^*(k)_{02}(0.66) = -0.4400$ |
| $J_{02}^*(0.68) = 0.1542$ | $u^*(k)_{02}(0.68) = -0.4600$ |
| $J_{02}^*(0.70) = 0.1634$ | $u^*(k)_{02}(0.70) = -0.4600$ |
| $J_{02}^*(0.72) = 0.1728$ | $u^*(k)_{02}(0.72) = -0.4800$ |
| $J_{02}^*(0.74) = 0.1826$ | $u^*(k)_{02}(0.74) = -0.5000$ |
| $J_{02}^*(0.76) = 0.1926$ | $u^*(k)_{02}(0.76) = -0.5000$ |
| $J_{02}^*(0.78) = 0.2028$ | $u^*(k)_{02}(0.78) = -0.5200$ |
| $J_{02}^*(0.80) = 0.2134$ | $u^*(k)_{02}(0.80) = -0.5400$ |
| $J_{02}^*(0.82) = 0.2242$ | $u^*(k)_{02}(0.82) = -0.5400$ |
| $J_{02}^*(0.84) = 0.2352$ | $u^*(k)_{02}(0.84) = -0.5600$ |
| $J_{02}^*(0.86) = 0.2466$ | $u^*(k)_{02}(0.86) = -0.5800$ |
| $J_{02}^*(0.88) = 0.2582$ | $u^*(k)_{02}(0.88) = -0.5800$ |
| $J_{02}^*(0.90) = 0.2700$ | $u^*(k)_{02}(0.90) = -0.6000$ |
| $J_{02}^*(0.92) = 0.2822$ | $u^*(k)_{02}(0.92) = -0.6200$ |
| $J_{02}^*(0.94) = 0.2946$ | $u^*(k)_{02}(0.94) = -0.6200$ |
| $J_{02}^*(0.96) = 0.3072$ | $u^*(k)_{02}(0.96) = -0.6400$ |
| $J_{02}^*(0.98) = 0.3202$ | $u^*(k)_{02}(0.98) = -0.6600$ |



|                           |                               |
|---------------------------|-------------------------------|
| $J_{02}^*(1.00) = 0.3334$ | $u^*(k)_{02}(1.00) = -0.6600$ |
| $J_{02}^*(1.02) = 0.3468$ | $u^*(k)_{02}(1.02) = -0.6800$ |
| $J_{02}^*(1.04) = 0.3606$ | $u^*(k)_{02}(1.04) = -0.7000$ |
| $J_{02}^*(1.06) = 0.3746$ | $u^*(k)_{02}(1.06) = -0.7000$ |
| $J_{02}^*(1.08) = 0.3888$ | $u^*(k)_{02}(1.08) = -0.7200$ |
| $J_{02}^*(1.10) = 0.4034$ | $u^*(k)_{02}(1.10) = -0.7400$ |
| $J_{02}^*(1.12) = 0.4182$ | $u^*(k)_{02}(1.12) = -0.7400$ |
| $J_{02}^*(1.14) = 0.4332$ | $u^*(k)_{02}(1.14) = -0.7600$ |
| $J_{02}^*(1.16) = 0.4486$ | $u^*(k)_{02}(1.16) = -0.7800$ |
| $J_{02}^*(1.18) = 0.4642$ | $u^*(k)_{02}(1.18) = -0.7800$ |
| $J_{02}^*(1.20) = 0.4800$ | $u^*(k)_{02}(1.20) = -0.8000$ |
| $J_{02}^*(1.22) = 0.4962$ | $u^*(k)_{02}(1.22) = -0.8200$ |
| $J_{02}^*(1.24) = 0.5126$ | $u^*(k)_{02}(1.24) = -0.8200$ |
| $J_{02}^*(1.26) = 0.5292$ | $u^*(k)_{02}(1.26) = -0.8400$ |
| $J_{02}^*(1.28) = 0.5462$ | $u^*(k)_{02}(1.28) = -0.8600$ |
| $J_{02}^*(1.30) = 0.5634$ | $u^*(k)_{02}(1.30) = -0.8600$ |
| $J_{02}^*(1.32) = 0.5808$ | $u^*(k)_{02}(1.32) = -0.8800$ |
| $J_{02}^*(1.34) = 0.5986$ | $u^*(k)_{02}(1.34) = -0.9000$ |
| $J_{02}^*(1.36) = 0.6166$ | $u^*(k)_{02}(1.36) = -0.9000$ |
| $J_{02}^*(1.38) = 0.6348$ | $u^*(k)_{02}(1.38) = -0.9200$ |
| $J_{02}^*(1.40) = 0.6534$ | $u^*(k)_{02}(1.40) = -0.9400$ |
| $J_{02}^*(1.42) = 0.6722$ | $u^*(k)_{02}(1.42) = -0.9400$ |
| $J_{02}^*(1.44) = 0.6912$ | $u^*(k)_{02}(1.44) = -0.9600$ |
| $J_{02}^*(1.46) = 0.7106$ | $u^*(k)_{02}(1.46) = -0.9800$ |
| $J_{02}^*(1.48) = 0.7302$ | $u^*(k)_{02}(1.48) = -0.9800$ |
| $J_{02}^*(1.50) = 0.7500$ | $u^*(k)_{02}(1.50) = -1.0000$ |
| $J_{12}^*(0.00) = 0.0000$ | $u^*(k)_{13}(0.00) = 0.0000$  |
| $J_{12}^*(0.02) = 0.0002$ | $u^*(k)_{13}(0.02) = 0.0000$  |
| $J_{12}^*(0.04) = 0.0004$ | $u^*(k)_{13}(0.04) = -0.0200$ |
| $J_{12}^*(0.06) = 0.0008$ | $u^*(k)_{13}(0.06) = -0.0200$ |
| $J_{12}^*(0.08) = 0.0014$ | $u^*(k)_{13}(0.08) = -0.0200$ |
| $J_{12}^*(0.10) = 0.0020$ | $u^*(k)_{13}(0.10) = -0.0400$ |
| $J_{12}^*(0.12) = 0.0030$ | $u^*(k)_{13}(0.12) = -0.0400$ |
| $J_{12}^*(0.14) = 0.0040$ | $u^*(k)_{13}(0.14) = -0.0600$ |
| $J_{12}^*(0.16) = 0.0052$ | $u^*(k)_{13}(0.16) = -0.0600$ |
| $J_{12}^*(0.18) = 0.0066$ | $u^*(k)_{13}(0.18) = -0.0600$ |
| $J_{12}^*(0.20) = 0.0080$ | $u^*(k)_{13}(0.20) = -0.0800$ |
| $J_{12}^*(0.22) = 0.0098$ | $u^*(k)_{13}(0.22) = -0.0800$ |
| $J_{12}^*(0.24) = 0.0116$ | $u^*(k)_{13}(0.24) = -0.1000$ |
| $J_{12}^*(0.26) = 0.0136$ | $u^*(k)_{13}(0.26) = -0.1000$ |
| $J_{12}^*(0.28) = 0.0158$ | $u^*(k)_{13}(0.28) = -0.1200$ |
| $J_{12}^*(0.30) = 0.0180$ | $u^*(k)_{13}(0.30) = -0.1200$ |
| $J_{12}^*(0.32) = 0.0206$ | $u^*(k)_{13}(0.32) = -0.1200$ |
| $J_{12}^*(0.34) = 0.0232$ | $u^*(k)_{13}(0.34) = -0.1400$ |
| $J_{12}^*(0.36) = 0.0260$ | $u^*(k)_{13}(0.36) = -0.1400$ |
| $J_{12}^*(0.38) = 0.0290$ | $u^*(k)_{13}(0.38) = -0.1400$ |
| $J_{12}^*(0.40) = 0.0320$ | $u^*(k)_{13}(0.40) = -0.1600$ |
| $J_{12}^*(0.42) = 0.0354$ | $u^*(k)_{13}(0.42) = -0.1600$ |
| $J_{12}^*(0.44) = 0.0388$ | $u^*(k)_{13}(0.44) = -0.1800$ |
| $J_{12}^*(0.46) = 0.0424$ | $u^*(k)_{13}(0.46) = -0.1800$ |
| $J_{12}^*(0.48) = 0.0462$ | $u^*(k)_{13}(0.48) = -0.1800$ |
| $J_{12}^*(0.50) = 0.0500$ | $u^*(k)_{13}(0.50) = -0.2000$ |
| $J_{12}^*(0.52) = 0.0542$ | $u^*(k)_{13}(0.52) = -0.2000$ |
| $J_{12}^*(0.54) = 0.0584$ | $u^*(k)_{13}(0.54) = -0.2200$ |

|                           |                               |
|---------------------------|-------------------------------|
| $J_{12}^*(0.56) = 0.0628$ | $u^*(k)_{13}(0.56) = -0.2200$ |
| $J_{12}^*(0.58) = 0.0674$ | $u^*(k)_{13}(0.58) = -0.2200$ |
| $J_{12}^*(0.60) = 0.0720$ | $u^*(k)_{13}(0.60) = -0.2400$ |
| $J_{12}^*(0.62) = 0.0770$ | $u^*(k)_{13}(0.62) = -0.2400$ |
| $J_{12}^*(0.64) = 0.0820$ | $u^*(k)_{13}(0.64) = -0.2600$ |
| $J_{12}^*(0.66) = 0.0872$ | $u^*(k)_{13}(0.66) = -0.2600$ |
| $J_{12}^*(0.68) = 0.0926$ | $u^*(k)_{13}(0.68) = -0.2600$ |
| $J_{12}^*(0.70) = 0.0980$ | $u^*(k)_{13}(0.70) = -0.2800$ |
| $J_{12}^*(0.72) = 0.1038$ | $u^*(k)_{13}(0.72) = -0.2800$ |
| $J_{12}^*(0.74) = 0.1096$ | $u^*(k)_{13}(0.74) = -0.3000$ |
| $J_{12}^*(0.76) = 0.1156$ | $u^*(k)_{13}(0.76) = -0.3000$ |
| $J_{12}^*(0.78) = 0.1218$ | $u^*(k)_{13}(0.78) = -0.3000$ |
| $J_{12}^*(0.80) = 0.1280$ | $u^*(k)_{13}(0.80) = -0.3200$ |
| $J_{12}^*(0.82) = 0.1346$ | $u^*(k)_{13}(0.82) = -0.3200$ |
| $J_{12}^*(0.84) = 0.1412$ | $u^*(k)_{13}(0.84) = -0.3400$ |
| $J_{12}^*(0.86) = 0.1480$ | $u^*(k)_{13}(0.86) = -0.3400$ |
| $J_{12}^*(0.88) = 0.1550$ | $u^*(k)_{13}(0.88) = -0.3400$ |
| $J_{12}^*(0.90) = 0.1620$ | $u^*(k)_{13}(0.90) = -0.3600$ |
| $J_{12}^*(0.92) = 0.1694$ | $u^*(k)_{13}(0.92) = -0.3600$ |
| $J_{12}^*(0.94) = 0.1768$ | $u^*(k)_{13}(0.94) = -0.3800$ |
| $J_{12}^*(0.96) = 0.1844$ | $u^*(k)_{13}(0.96) = -0.3800$ |
| $J_{12}^*(0.98) = 0.1922$ | $u^*(k)_{13}(0.98) = -0.3800$ |
| $J_{12}^*(1.00) = 0.2000$ | $u^*(k)_{13}(1.00) = -0.4000$ |
| $J_{12}^*(1.02) = 0.2082$ | $u^*(k)_{13}(1.02) = -0.4000$ |
| $J_{12}^*(1.04) = 0.2164$ | $u^*(k)_{13}(1.04) = -0.4200$ |
| $J_{12}^*(1.06) = 0.2248$ | $u^*(k)_{13}(1.06) = -0.4200$ |
| $J_{12}^*(1.08) = 0.2334$ | $u^*(k)_{13}(1.08) = -0.4200$ |
| $J_{12}^*(1.10) = 0.2420$ | $u^*(k)_{13}(1.10) = -0.4400$ |
| $J_{12}^*(1.12) = 0.2510$ | $u^*(k)_{13}(1.12) = -0.4400$ |
| $J_{12}^*(1.14) = 0.2600$ | $u^*(k)_{13}(1.14) = -0.4600$ |
| $J_{12}^*(1.16) = 0.2692$ | $u^*(k)_{13}(1.16) = -0.4600$ |
| $J_{12}^*(1.18) = 0.2786$ | $u^*(k)_{13}(1.18) = -0.4600$ |
| $J_{12}^*(1.20) = 0.2880$ | $u^*(k)_{13}(1.20) = -0.4800$ |
| $J_{12}^*(1.22) = 0.2978$ | $u^*(k)_{13}(1.22) = -0.4800$ |
| $J_{12}^*(1.24) = 0.3076$ | $u^*(k)_{13}(1.24) = -0.5000$ |
| $J_{12}^*(1.26) = 0.3176$ | $u^*(k)_{13}(1.26) = -0.5000$ |
| $J_{12}^*(1.28) = 0.3278$ | $u^*(k)_{13}(1.28) = -0.5000$ |
| $J_{12}^*(1.30) = 0.3380$ | $u^*(k)_{13}(1.30) = -0.5200$ |
| $J_{12}^*(1.32) = 0.3486$ | $u^*(k)_{13}(1.32) = -0.5200$ |
| $J_{12}^*(1.34) = 0.3592$ | $u^*(k)_{13}(1.34) = -0.5400$ |
| $J_{12}^*(1.36) = 0.3700$ | $u^*(k)_{13}(1.36) = -0.5400$ |
| $J_{12}^*(1.38) = 0.3810$ | $u^*(k)_{13}(1.38) = -0.5400$ |
| $J_{12}^*(1.40) = 0.3920$ | $u^*(k)_{13}(1.40) = -0.5600$ |
| $J_{12}^*(1.42) = 0.4034$ | $u^*(k)_{13}(1.42) = -0.5600$ |
| $J_{12}^*(1.44) = 0.4148$ | $u^*(k)_{13}(1.44) = -0.5800$ |
| $J_{12}^*(1.46) = 0.4264$ | $u^*(k)_{13}(1.46) = -0.5800$ |
| $J_{12}^*(1.48) = 0.4382$ | $u^*(k)_{13}(1.48) = -0.5800$ |
| $J_{12}^*(1.50) = 0.4500$ | $u^*(k)_{13}(1.50) = -0.6000$ |

### 3-16 Part (a)

|                           |                              |
|---------------------------|------------------------------|
| $J_{02}^*(0.00) = 0.0000$ | $u^*(k)_{02}(0.00) = 0.0000$ |
| $J_{02}^*(0.02) = 0.0001$ | $u^*(k)_{02}(0.02) = 0.0000$ |
| $J_{02}^*(0.04) = 0.0006$ | $u^*(k)_{02}(0.04) = 0.0000$ |

|                           |                               |
|---------------------------|-------------------------------|
| $J_{02}^*(0.06) = 0.0011$ | $u^*(k)_{02}(0.06) = -0.0200$ |
| $J_{02}^*(0.08) = 0.0016$ | $u^*(k)_{02}(0.08) = -0.0200$ |
| $J_{02}^*(0.10) = 0.0024$ | $u^*(k)_{02}(0.10) = -0.0200$ |
| $J_{02}^*(0.12) = 0.0035$ | $u^*(k)_{02}(0.12) = -0.0200$ |
| $J_{02}^*(0.14) = 0.0049$ | $u^*(k)_{02}(0.14) = -0.0200$ |
| $J_{02}^*(0.16) = 0.0063$ | $u^*(k)_{02}(0.16) = -0.0400$ |
| $J_{02}^*(0.18) = 0.0078$ | $u^*(k)_{02}(0.18) = -0.0400$ |
| $J_{02}^*(0.20) = 0.0096$ | $u^*(k)_{02}(0.20) = -0.0400$ |
| $J_{02}^*(0.22) = 0.0117$ | $u^*(k)_{02}(0.22) = -0.0400$ |
| $J_{02}^*(0.24) = 0.0140$ | $u^*(k)_{02}(0.24) = -0.0400$ |
| $J_{02}^*(0.26) = 0.0164$ | $u^*(k)_{02}(0.26) = -0.0600$ |
| $J_{02}^*(0.28) = 0.0189$ | $u^*(k)_{02}(0.28) = -0.0600$ |
| $J_{02}^*(0.30) = 0.0216$ | $u^*(k)_{02}(0.30) = -0.0600$ |
| $J_{02}^*(0.32) = 0.0246$ | $u^*(k)_{02}(0.32) = -0.0600$ |
| $J_{02}^*(0.34) = 0.0279$ | $u^*(k)_{02}(0.34) = -0.0600$ |
| $J_{02}^*(0.36) = 0.0313$ | $u^*(k)_{02}(0.36) = -0.0800$ |
| $J_{02}^*(0.38) = 0.0347$ | $u^*(k)_{02}(0.38) = -0.0800$ |
| $J_{02}^*(0.40) = 0.0384$ | $u^*(k)_{02}(0.40) = -0.0800$ |
| $J_{02}^*(0.42) = 0.0424$ | $u^*(k)_{02}(0.42) = -0.0800$ |
| $J_{02}^*(0.44) = 0.0467$ | $u^*(k)_{02}(0.44) = -0.0800$ |
| $J_{02}^*(0.46) = 0.0510$ | $u^*(k)_{02}(0.46) = -0.1000$ |
| $J_{02}^*(0.48) = 0.0553$ | $u^*(k)_{02}(0.48) = -0.1000$ |
| $J_{02}^*(0.50) = 0.0600$ | $u^*(k)_{02}(0.50) = -0.1000$ |
| $J_{02}^*(0.52) = 0.0649$ | $u^*(k)_{02}(0.52) = -0.1000$ |
| $J_{02}^*(0.54) = 0.0702$ | $u^*(k)_{02}(0.54) = -0.1000$ |
| $J_{02}^*(0.56) = 0.0755$ | $u^*(k)_{02}(0.56) = -0.1200$ |
| $J_{02}^*(0.58) = 0.0808$ | $u^*(k)_{02}(0.58) = -0.1200$ |
| $J_{02}^*(0.60) = 0.0864$ | $u^*(k)_{02}(0.60) = -0.1200$ |
| $J_{02}^*(0.62) = 0.0923$ | $u^*(k)_{02}(0.62) = -0.1200$ |
| $J_{02}^*(0.64) = 0.0985$ | $u^*(k)_{02}(0.64) = -0.1200$ |
| $J_{02}^*(0.66) = 0.1047$ | $u^*(k)_{02}(0.66) = -0.1400$ |
| $J_{02}^*(0.68) = 0.1110$ | $u^*(k)_{02}(0.68) = -0.1400$ |
| $J_{02}^*(0.70) = 0.1176$ | $u^*(k)_{02}(0.70) = -0.1400$ |
| $J_{02}^*(0.72) = 0.1245$ | $u^*(k)_{02}(0.72) = -0.1400$ |
| $J_{02}^*(0.74) = 0.1316$ | $u^*(k)_{02}(0.74) = -0.1400$ |
| $J_{02}^*(0.76) = 0.1388$ | $u^*(k)_{02}(0.76) = -0.1600$ |
| $J_{02}^*(0.78) = 0.1461$ | $u^*(k)_{02}(0.78) = -0.1600$ |
| $J_{02}^*(0.80) = 0.1536$ | $u^*(k)_{02}(0.80) = -0.1600$ |
| $J_{02}^*(0.82) = 0.1614$ | $u^*(k)_{02}(0.82) = -0.1600$ |
| $J_{02}^*(0.84) = 0.1695$ | $u^*(k)_{02}(0.84) = -0.1600$ |
| $J_{02}^*(0.86) = 0.1777$ | $u^*(k)_{02}(0.86) = -0.1800$ |
| $J_{02}^*(0.88) = 0.1859$ | $u^*(k)_{02}(0.88) = -0.1800$ |
| $J_{02}^*(0.90) = 0.1944$ | $u^*(k)_{02}(0.90) = -0.1800$ |
| $J_{02}^*(0.92) = 0.2032$ | $u^*(k)_{02}(0.92) = -0.1800$ |
| $J_{02}^*(0.94) = 0.2123$ | $u^*(k)_{02}(0.94) = -0.1800$ |
| $J_{02}^*(0.96) = 0.2214$ | $u^*(k)_{02}(0.96) = -0.2000$ |
| $J_{02}^*(0.98) = 0.2305$ | $u^*(k)_{02}(0.98) = -0.2000$ |
| $J_{02}^*(1.00) = 0.2400$ | $u^*(k)_{02}(1.00) = -0.2000$ |
| $J_{02}^*(1.02) = 0.2497$ | $u^*(k)_{02}(1.02) = -0.2000$ |
| $J_{02}^*(1.04) = 0.2598$ | $u^*(k)_{02}(1.04) = -0.2000$ |
| $J_{02}^*(1.06) = 0.2699$ | $u^*(k)_{02}(1.06) = -0.2200$ |
| $J_{02}^*(1.08) = 0.2800$ | $u^*(k)_{02}(1.08) = -0.2200$ |
| $J_{02}^*(0.01) = 0.0001$ | $u^*(k)_{02}(0.01) = 0.0000$  |
| $J_{02}^*(0.03) = 0.0004$ | $u^*(k)_{02}(0.03) = 0.0000$  |

|                           |                               |
|---------------------------|-------------------------------|
| $J_{02}^*(0.05) = 0.0009$ | $u^*(k)_{02}(0.05) = -0.0200$ |
| $J_{02}^*(0.07) = 0.0013$ | $u^*(k)_{02}(0.07) = -0.0200$ |
| $J_{02}^*(0.09) = 0.0020$ | $u^*(k)_{02}(0.09) = -0.0200$ |
| $J_{02}^*(0.11) = 0.0030$ | $u^*(k)_{02}(0.11) = -0.0200$ |
| $J_{02}^*(0.13) = 0.0043$ | $u^*(k)_{02}(0.13) = -0.0200$ |
| $J_{02}^*(0.15) = 0.0058$ | $u^*(k)_{02}(0.15) = -0.0400$ |
| $J_{02}^*(0.17) = 0.0072$ | $u^*(k)_{02}(0.17) = -0.0400$ |
| $J_{02}^*(0.19) = 0.0089$ | $u^*(k)_{02}(0.19) = -0.0400$ |
| $J_{02}^*(0.21) = 0.0108$ | $u^*(k)_{02}(0.21) = -0.0400$ |
| $J_{02}^*(0.23) = 0.0130$ | $u^*(k)_{02}(0.23) = -0.0400$ |
| $J_{02}^*(0.25) = 0.0155$ | $u^*(k)_{02}(0.25) = -0.0600$ |
| $J_{02}^*(0.27) = 0.0179$ | $u^*(k)_{02}(0.27) = -0.0600$ |
| $J_{02}^*(0.29) = 0.0205$ | $u^*(k)_{02}(0.29) = -0.0600$ |
| $J_{02}^*(0.31) = 0.0234$ | $u^*(k)_{02}(0.31) = -0.0600$ |
| $J_{02}^*(0.33) = 0.0266$ | $u^*(k)_{02}(0.33) = -0.0600$ |
| $J_{02}^*(0.35) = 0.0300$ | $u^*(k)_{02}(0.35) = -0.0800$ |
| $J_{02}^*(0.37) = 0.0333$ | $u^*(k)_{02}(0.37) = -0.0800$ |
| $J_{02}^*(0.39) = 0.0369$ | $u^*(k)_{02}(0.39) = -0.0800$ |
| $J_{02}^*(0.41) = 0.0408$ | $u^*(k)_{02}(0.41) = -0.0800$ |
| $J_{02}^*(0.43) = 0.0449$ | $u^*(k)_{02}(0.43) = -0.0800$ |
| $J_{02}^*(0.45) = 0.0493$ | $u^*(k)_{02}(0.45) = -0.1000$ |
| $J_{02}^*(0.47) = 0.0536$ | $u^*(k)_{02}(0.47) = -0.1000$ |
| $J_{02}^*(0.49) = 0.0581$ | $u^*(k)_{02}(0.49) = -0.1000$ |
| $J_{02}^*(0.51) = 0.0629$ | $u^*(k)_{02}(0.51) = -0.1000$ |
| $J_{02}^*(0.53) = 0.0680$ | $u^*(k)_{02}(0.53) = -0.1000$ |
| $J_{02}^*(0.55) = 0.0734$ | $u^*(k)_{02}(0.55) = -0.1200$ |
| $J_{02}^*(0.57) = 0.0786$ | $u^*(k)_{02}(0.57) = -0.1200$ |
| $J_{02}^*(0.59) = 0.0841$ | $u^*(k)_{02}(0.59) = -0.1200$ |
| $J_{02}^*(0.61) = 0.0899$ | $u^*(k)_{02}(0.61) = -0.1200$ |
| $J_{02}^*(0.63) = 0.0960$ | $u^*(k)_{02}(0.63) = -0.1200$ |
| $J_{02}^*(0.65) = 0.1023$ | $u^*(k)_{02}(0.65) = -0.1400$ |
| $J_{02}^*(0.67) = 0.1085$ | $u^*(k)_{02}(0.67) = -0.1400$ |
| $J_{02}^*(0.69) = 0.1149$ | $u^*(k)_{02}(0.69) = -0.1400$ |
| $J_{02}^*(0.71) = 0.1217$ | $u^*(k)_{02}(0.71) = -0.1400$ |
| $J_{02}^*(0.73) = 0.1287$ | $u^*(k)_{02}(0.73) = -0.1400$ |
| $J_{02}^*(0.75) = 0.1360$ | $u^*(k)_{02}(0.75) = -0.1600$ |
| $J_{02}^*(0.77) = 0.1431$ | $u^*(k)_{02}(0.77) = -0.1600$ |
| $J_{02}^*(0.79) = 0.1506$ | $u^*(k)_{02}(0.79) = -0.1600$ |
| $J_{02}^*(0.81) = 0.1583$ | $u^*(k)_{02}(0.81) = -0.1600$ |
| $J_{02}^*(0.83) = 0.1663$ | $u^*(k)_{02}(0.83) = -0.1600$ |
| $J_{02}^*(0.85) = 0.1745$ | $u^*(k)_{02}(0.85) = -0.1800$ |
| $J_{02}^*(0.87) = 0.1826$ | $u^*(k)_{02}(0.87) = -0.1800$ |
| $J_{02}^*(0.89) = 0.1910$ | $u^*(k)_{02}(0.89) = -0.1800$ |
| $J_{02}^*(0.91) = 0.1996$ | $u^*(k)_{02}(0.91) = -0.1800$ |
| $J_{02}^*(0.93) = 0.2086$ | $u^*(k)_{02}(0.93) = -0.1800$ |
| $J_{02}^*(0.95) = 0.2178$ | $u^*(k)_{02}(0.95) = -0.2000$ |
| $J_{02}^*(0.97) = 0.2268$ | $u^*(k)_{02}(0.97) = -0.2000$ |
| $J_{02}^*(0.99) = 0.2362$ | $u^*(k)_{02}(0.99) = -0.2000$ |
| $J_{02}^*(1.01) = 0.2458$ | $u^*(k)_{02}(1.01) = -0.2000$ |
| $J_{02}^*(1.03) = 0.2557$ | $u^*(k)_{02}(1.03) = -0.2000$ |
| $J_{02}^*(1.05) = 0.2659$ | $u^*(k)_{02}(1.05) = -0.2200$ |
| $J_{02}^*(1.07) = 0.2759$ | $u^*(k)_{02}(1.07) = -0.2200$ |
| $J_{02}^*(1.09) = 0.2862$ | $u^*(k)_{02}(1.09) = -0.2200$ |
| $J_{02}^*(0.00) = 0.0000$ | $u^*(k)_{02}(0.00) = 0.0000$  |

|                           |                               |
|---------------------------|-------------------------------|
| $J_{02}^*(0.02) = 0.0002$ | $u^*(k)_{02}(0.02) = 0.0000$  |
| $J_{02}^*(0.04) = 0.0007$ | $u^*(k)_{02}(0.04) = 0.0000$  |
| $J_{02}^*(0.06) = 0.0011$ | $u^*(k)_{02}(0.06) = -0.0200$ |
| $J_{02}^*(0.08) = 0.0017$ | $u^*(k)_{02}(0.08) = -0.0200$ |
| $J_{02}^*(0.10) = 0.0026$ | $u^*(k)_{02}(0.10) = -0.0200$ |
| $J_{02}^*(0.12) = 0.0038$ | $u^*(k)_{02}(0.12) = -0.0200$ |
| $J_{02}^*(0.14) = 0.0052$ | $u^*(k)_{02}(0.14) = -0.0200$ |
| $J_{02}^*(0.16) = 0.0066$ | $u^*(k)_{02}(0.16) = -0.0400$ |
| $J_{02}^*(0.18) = 0.0082$ | $u^*(k)_{02}(0.18) = -0.0400$ |
| $J_{02}^*(0.20) = 0.0100$ | $u^*(k)_{02}(0.20) = -0.0400$ |
| $J_{02}^*(0.22) = 0.0121$ | $u^*(k)_{02}(0.22) = -0.0400$ |
| $J_{02}^*(0.24) = 0.0145$ | $u^*(k)_{02}(0.24) = -0.0400$ |
| $J_{02}^*(0.26) = 0.0169$ | $u^*(k)_{02}(0.26) = -0.0600$ |
| $J_{02}^*(0.28) = 0.0194$ | $u^*(k)_{02}(0.28) = -0.0600$ |
| $J_{02}^*(0.30) = 0.0222$ | $u^*(k)_{02}(0.30) = -0.0600$ |
| $J_{02}^*(0.32) = 0.0253$ | $u^*(k)_{02}(0.32) = -0.0600$ |
| $J_{02}^*(0.34) = 0.0286$ | $u^*(k)_{02}(0.34) = -0.0600$ |
| $J_{02}^*(0.36) = 0.0320$ | $u^*(k)_{02}(0.36) = -0.0800$ |
| $J_{02}^*(0.38) = 0.0354$ | $u^*(k)_{02}(0.38) = -0.0800$ |
| $J_{02}^*(0.40) = 0.0392$ | $u^*(k)_{02}(0.40) = -0.0800$ |
| $J_{02}^*(0.42) = 0.0432$ | $u^*(k)_{02}(0.42) = -0.0800$ |
| $J_{02}^*(0.44) = 0.0475$ | $u^*(k)_{02}(0.44) = -0.0800$ |
| $J_{02}^*(0.46) = 0.0518$ | $u^*(k)_{02}(0.46) = -0.1000$ |
| $J_{02}^*(0.48) = 0.0563$ | $u^*(k)_{02}(0.48) = -0.1000$ |
| $J_{02}^*(0.50) = 0.0610$ | $u^*(k)_{02}(0.50) = -0.1000$ |
| $J_{02}^*(0.52) = 0.0660$ | $u^*(k)_{02}(0.52) = -0.1000$ |
| $J_{02}^*(0.54) = 0.0713$ | $u^*(k)_{02}(0.54) = -0.1000$ |
| $J_{02}^*(0.56) = 0.0765$ | $u^*(k)_{02}(0.56) = -0.1200$ |
| $J_{02}^*(0.58) = 0.0819$ | $u^*(k)_{02}(0.58) = -0.1200$ |
| $J_{02}^*(0.60) = 0.0876$ | $u^*(k)_{02}(0.60) = -0.1200$ |
| $J_{02}^*(0.62) = 0.0935$ | $u^*(k)_{02}(0.62) = -0.1200$ |
| $J_{02}^*(0.64) = 0.0998$ | $u^*(k)_{02}(0.64) = -0.1200$ |
| $J_{02}^*(0.66) = 0.1060$ | $u^*(k)_{02}(0.66) = -0.1400$ |
| $J_{02}^*(0.68) = 0.1123$ | $u^*(k)_{02}(0.68) = -0.1400$ |
| $J_{02}^*(0.70) = 0.1189$ | $u^*(k)_{02}(0.70) = -0.1400$ |
| $J_{02}^*(0.72) = 0.1259$ | $u^*(k)_{02}(0.72) = -0.1400$ |
| $J_{02}^*(0.74) = 0.1331$ | $u^*(k)_{02}(0.74) = -0.1400$ |
| $J_{02}^*(0.76) = 0.1402$ | $u^*(k)_{02}(0.76) = -0.1600$ |
| $J_{02}^*(0.78) = 0.1475$ | $u^*(k)_{02}(0.78) = -0.1600$ |
| $J_{02}^*(0.80) = 0.1551$ | $u^*(k)_{02}(0.80) = -0.1600$ |
| $J_{02}^*(0.82) = 0.1630$ | $u^*(k)_{02}(0.82) = -0.1600$ |
| $J_{02}^*(0.84) = 0.1712$ | $u^*(k)_{02}(0.84) = -0.1600$ |
| $J_{02}^*(0.86) = 0.1793$ | $u^*(k)_{02}(0.86) = -0.1800$ |
| $J_{02}^*(0.88) = 0.1876$ | $u^*(k)_{02}(0.88) = -0.1800$ |
| $J_{02}^*(0.90) = 0.1961$ | $u^*(k)_{02}(0.90) = -0.1800$ |
| $J_{02}^*(0.92) = 0.2050$ | $u^*(k)_{02}(0.92) = -0.1800$ |
| $J_{02}^*(0.94) = 0.2141$ | $u^*(k)_{02}(0.94) = -0.1800$ |
| $J_{02}^*(0.96) = 0.2232$ | $u^*(k)_{02}(0.96) = -0.2000$ |
| $J_{02}^*(0.98) = 0.2324$ | $u^*(k)_{02}(0.98) = -0.2000$ |
| $J_{02}^*(1.00) = 0.2419$ | $u^*(k)_{02}(1.00) = -0.2000$ |
| $J_{02}^*(1.02) = 0.2517$ | $u^*(k)_{02}(1.02) = -0.2000$ |
| $J_{02}^*(1.04) = 0.2618$ | $u^*(k)_{02}(1.04) = -0.2000$ |
| $J_{02}^*(1.06) = 0.2719$ | $u^*(k)_{02}(1.06) = -0.2200$ |
| $J_{02}^*(1.08) = 0.2820$ | $u^*(k)_{02}(1.08) = -0.2200$ |

|                           |                               |
|---------------------------|-------------------------------|
| $J_{02}^*(1.10) = 0.2925$ | $u^*(k)_{02}(1.10) = -0.2200$ |
| $J_{02}^*(0.02) = 0.0001$ | $u^*(k)_{02}(0.02) = 0.0000$  |
| $J_{02}^*(0.04) = 0.0005$ | $u^*(k)_{02}(0.04) = 0.0000$  |
| $J_{02}^*(0.06) = 0.0010$ | $u^*(k)_{02}(0.06) = -0.0200$ |
| $J_{02}^*(0.08) = 0.0015$ | $u^*(k)_{02}(0.08) = -0.0200$ |
| $J_{02}^*(0.10) = 0.0022$ | $u^*(k)_{02}(0.10) = -0.0200$ |
| $J_{02}^*(0.12) = 0.0033$ | $u^*(k)_{02}(0.12) = -0.0200$ |
| $J_{02}^*(0.14) = 0.0046$ | $u^*(k)_{02}(0.14) = -0.0200$ |
| $J_{02}^*(0.16) = 0.0061$ | $u^*(k)_{02}(0.16) = -0.0400$ |
| $J_{02}^*(0.18) = 0.0075$ | $u^*(k)_{02}(0.18) = -0.0400$ |
| $J_{02}^*(0.20) = 0.0092$ | $u^*(k)_{02}(0.20) = -0.0400$ |
| $J_{02}^*(0.22) = 0.0112$ | $u^*(k)_{02}(0.22) = -0.0400$ |
| $J_{02}^*(0.24) = 0.0135$ | $u^*(k)_{02}(0.24) = -0.0400$ |
| $J_{02}^*(0.26) = 0.0160$ | $u^*(k)_{02}(0.26) = -0.0600$ |
| $J_{02}^*(0.28) = 0.0184$ | $u^*(k)_{02}(0.28) = -0.0600$ |
| $J_{02}^*(0.30) = 0.0210$ | $u^*(k)_{02}(0.30) = -0.0600$ |
| $J_{02}^*(0.32) = 0.0240$ | $u^*(k)_{02}(0.32) = -0.0600$ |
| $J_{02}^*(0.34) = 0.0273$ | $u^*(k)_{02}(0.34) = -0.0600$ |
| $J_{02}^*(0.36) = 0.0306$ | $u^*(k)_{02}(0.36) = -0.0800$ |
| $J_{02}^*(0.38) = 0.0340$ | $u^*(k)_{02}(0.38) = -0.0800$ |
| $J_{02}^*(0.40) = 0.0376$ | $u^*(k)_{02}(0.40) = -0.0800$ |
| $J_{02}^*(0.42) = 0.0416$ | $u^*(k)_{02}(0.42) = -0.0800$ |
| $J_{02}^*(0.44) = 0.0458$ | $u^*(k)_{02}(0.44) = -0.0800$ |
| $J_{02}^*(0.46) = 0.0501$ | $u^*(k)_{02}(0.46) = -0.1000$ |
| $J_{02}^*(0.48) = 0.0544$ | $u^*(k)_{02}(0.48) = -0.1000$ |
| $J_{02}^*(0.50) = 0.0590$ | $u^*(k)_{02}(0.50) = -0.1000$ |
| $J_{02}^*(0.52) = 0.0639$ | $u^*(k)_{02}(0.52) = -0.1000$ |
| $J_{02}^*(0.54) = 0.0691$ | $u^*(k)_{02}(0.54) = -0.1000$ |
| $J_{02}^*(0.56) = 0.0744$ | $u^*(k)_{02}(0.56) = -0.1200$ |
| $J_{02}^*(0.58) = 0.0797$ | $u^*(k)_{02}(0.58) = -0.1200$ |
| $J_{02}^*(0.60) = 0.0853$ | $u^*(k)_{02}(0.60) = -0.1200$ |
| $J_{02}^*(0.62) = 0.0911$ | $u^*(k)_{02}(0.62) = -0.1200$ |
| $J_{02}^*(0.64) = 0.0972$ | $u^*(k)_{02}(0.64) = -0.1200$ |
| $J_{02}^*(0.66) = 0.1035$ | $u^*(k)_{02}(0.66) = -0.1400$ |
| $J_{02}^*(0.68) = 0.1097$ | $u^*(k)_{02}(0.68) = -0.1400$ |
| $J_{02}^*(0.70) = 0.1163$ | $u^*(k)_{02}(0.70) = -0.1400$ |
| $J_{02}^*(0.72) = 0.1231$ | $u^*(k)_{02}(0.72) = -0.1400$ |
| $J_{02}^*(0.74) = 0.1302$ | $u^*(k)_{02}(0.74) = -0.1400$ |
| $J_{02}^*(0.76) = 0.1374$ | $u^*(k)_{02}(0.76) = -0.1600$ |
| $J_{02}^*(0.78) = 0.1446$ | $u^*(k)_{02}(0.78) = -0.1600$ |
| $J_{02}^*(0.80) = 0.1521$ | $u^*(k)_{02}(0.80) = -0.1600$ |
| $J_{02}^*(0.82) = 0.1598$ | $u^*(k)_{02}(0.82) = -0.1600$ |
| $J_{02}^*(0.84) = 0.1679$ | $u^*(k)_{02}(0.84) = -0.1600$ |
| $J_{02}^*(0.86) = 0.1761$ | $u^*(k)_{02}(0.86) = -0.1800$ |
| $J_{02}^*(0.88) = 0.1842$ | $u^*(k)_{02}(0.88) = -0.1800$ |
| $J_{02}^*(0.90) = 0.1927$ | $u^*(k)_{02}(0.90) = -0.1800$ |
| $J_{02}^*(0.92) = 0.2014$ | $u^*(k)_{02}(0.92) = -0.1800$ |
| $J_{02}^*(0.94) = 0.2104$ | $u^*(k)_{02}(0.94) = -0.1800$ |
| $J_{02}^*(0.96) = 0.2196$ | $u^*(k)_{02}(0.96) = -0.2000$ |
| $J_{02}^*(0.98) = 0.2287$ | $u^*(k)_{02}(0.98) = -0.2000$ |
| $J_{02}^*(1.00) = 0.2381$ | $u^*(k)_{02}(1.00) = -0.2000$ |
| $J_{02}^*(1.02) = 0.2478$ | $u^*(k)_{02}(1.02) = -0.2000$ |
| $J_{02}^*(1.04) = 0.2577$ | $u^*(k)_{02}(1.04) = -0.2000$ |
| $J_{02}^*(1.06) = 0.2679$ | $u^*(k)_{02}(1.06) = -0.2200$ |

|                           |                               |
|---------------------------|-------------------------------|
| $J_{02}^*(1.08) = 0.2779$ | $u^*(k)_{02}(1.08) = -0.2200$ |
| $J_{02}^*(1.10) = 0.2883$ | $u^*(k)_{02}(1.10) = -0.2200$ |
| $J_{02}^*(1.12) = 0.2989$ | $u^*(k)_{02}(1.12) = -0.2200$ |
| $J_{02}^*(0.01) = 0.0000$ | $u^*(k)_{02}(0.01) = 0.0000$  |
| $J_{02}^*(0.03) = 0.0003$ | $u^*(k)_{02}(0.03) = 0.0000$  |
| $J_{02}^*(0.05) = 0.0008$ | $u^*(k)_{02}(0.05) = 0.0000$  |
| $J_{02}^*(0.07) = 0.0012$ | $u^*(k)_{02}(0.07) = -0.0200$ |
| $J_{02}^*(0.09) = 0.0019$ | $u^*(k)_{02}(0.09) = -0.0200$ |
| $J_{02}^*(0.11) = 0.0028$ | $u^*(k)_{02}(0.11) = -0.0200$ |
| $J_{02}^*(0.13) = 0.0040$ | $u^*(k)_{02}(0.13) = -0.0200$ |
| $J_{02}^*(0.15) = 0.0055$ | $u^*(k)_{02}(0.15) = -0.0200$ |
| $J_{02}^*(0.17) = 0.0069$ | $u^*(k)_{02}(0.17) = -0.0400$ |
| $J_{02}^*(0.19) = 0.0085$ | $u^*(k)_{02}(0.19) = -0.0400$ |
| $J_{02}^*(0.21) = 0.0104$ | $u^*(k)_{02}(0.21) = -0.0400$ |
| $J_{02}^*(0.23) = 0.0126$ | $u^*(k)_{02}(0.23) = -0.0400$ |
| $J_{02}^*(0.25) = 0.0150$ | $u^*(k)_{02}(0.25) = -0.0400$ |
| $J_{02}^*(0.27) = 0.0174$ | $u^*(k)_{02}(0.27) = -0.0600$ |
| $J_{02}^*(0.29) = 0.0199$ | $u^*(k)_{02}(0.29) = -0.0600$ |
| $J_{02}^*(0.31) = 0.0228$ | $u^*(k)_{02}(0.31) = -0.0600$ |
| $J_{02}^*(0.33) = 0.0259$ | $u^*(k)_{02}(0.33) = -0.0600$ |
| $J_{02}^*(0.35) = 0.0293$ | $u^*(k)_{02}(0.35) = -0.0600$ |
| $J_{02}^*(0.37) = 0.0326$ | $u^*(k)_{02}(0.37) = -0.0800$ |
| $J_{02}^*(0.39) = 0.0361$ | $u^*(k)_{02}(0.39) = -0.0800$ |
| $J_{02}^*(0.41) = 0.0400$ | $u^*(k)_{02}(0.41) = -0.0800$ |
| $J_{02}^*(0.43) = 0.0441$ | $u^*(k)_{02}(0.43) = -0.0800$ |
| $J_{02}^*(0.45) = 0.0484$ | $u^*(k)_{02}(0.45) = -0.0800$ |
| $J_{02}^*(0.47) = 0.0527$ | $u^*(k)_{02}(0.47) = -0.1000$ |
| $J_{02}^*(0.49) = 0.0572$ | $u^*(k)_{02}(0.49) = -0.1000$ |
| $J_{02}^*(0.51) = 0.0619$ | $u^*(k)_{02}(0.51) = -0.1000$ |
| $J_{02}^*(0.53) = 0.0670$ | $u^*(k)_{02}(0.53) = -0.1000$ |
| $J_{02}^*(0.55) = 0.0723$ | $u^*(k)_{02}(0.55) = -0.1000$ |
| $J_{02}^*(0.57) = 0.0776$ | $u^*(k)_{02}(0.57) = -0.1200$ |
| $J_{02}^*(0.59) = 0.0830$ | $u^*(k)_{02}(0.59) = -0.1200$ |
| $J_{02}^*(0.61) = 0.0887$ | $u^*(k)_{02}(0.61) = -0.1200$ |
| $J_{02}^*(0.63) = 0.0947$ | $u^*(k)_{02}(0.63) = -0.1200$ |
| $J_{02}^*(0.65) = 0.1011$ | $u^*(k)_{02}(0.65) = -0.1200$ |
| $J_{02}^*(0.67) = 0.1072$ | $u^*(k)_{02}(0.67) = -0.1400$ |
| $J_{02}^*(0.69) = 0.1136$ | $u^*(k)_{02}(0.69) = -0.1400$ |
| $J_{02}^*(0.71) = 0.1203$ | $u^*(k)_{02}(0.71) = -0.1400$ |
| $J_{02}^*(0.73) = 0.1273$ | $u^*(k)_{02}(0.73) = -0.1400$ |
| $J_{02}^*(0.75) = 0.1346$ | $u^*(k)_{02}(0.75) = -0.1400$ |
| $J_{02}^*(0.77) = 0.1417$ | $u^*(k)_{02}(0.77) = -0.1600$ |
| $J_{02}^*(0.79) = 0.1490$ | $u^*(k)_{02}(0.79) = -0.1600$ |
| $J_{02}^*(0.81) = 0.1567$ | $u^*(k)_{02}(0.81) = -0.1600$ |
| $J_{02}^*(0.83) = 0.1646$ | $u^*(k)_{02}(0.83) = -0.1600$ |
| $J_{02}^*(0.85) = 0.1729$ | $u^*(k)_{02}(0.85) = -0.1600$ |
| $J_{02}^*(0.87) = 0.1809$ | $u^*(k)_{02}(0.87) = -0.1800$ |
| $J_{02}^*(0.89) = 0.1893$ | $u^*(k)_{02}(0.89) = -0.1800$ |
| $J_{02}^*(0.91) = 0.1979$ | $u^*(k)_{02}(0.91) = -0.1800$ |
| $J_{02}^*(0.93) = 0.2068$ | $u^*(k)_{02}(0.93) = -0.1800$ |
| $J_{02}^*(0.95) = 0.2160$ | $u^*(k)_{02}(0.95) = -0.1800$ |
| $J_{02}^*(0.97) = 0.2250$ | $u^*(k)_{02}(0.97) = -0.2000$ |
| $J_{02}^*(0.99) = 0.2343$ | $u^*(k)_{02}(0.99) = -0.2000$ |
| $J_{02}^*(1.01) = 0.2439$ | $u^*(k)_{02}(1.01) = -0.2000$ |

|                           |                               |
|---------------------------|-------------------------------|
| $J_{02}^*(1.03) = 0.2537$ | $u^*(k)_{02}(1.03) = -0.2000$ |
| $J_{02}^*(1.05) = 0.2639$ | $u^*(k)_{02}(1.05) = -0.2000$ |
| $J_{02}^*(1.07) = 0.2739$ | $u^*(k)_{02}(1.07) = -0.2200$ |
| $J_{02}^*(1.09) = 0.2841$ | $u^*(k)_{02}(1.09) = -0.2200$ |
| $J_{02}^*(1.11) = 0.2946$ | $u^*(k)_{02}(1.11) = -0.2200$ |
| $J_{02}^*(1.13) = 0.3055$ | $u^*(k)_{02}(1.13) = -0.2200$ |
| $J_{02}^*(1.10) = 0.2904$ | $u^*(k)_{02}(1.10) = -0.2200$ |
| $J_{02}^*(1.12) = 0.3011$ | $u^*(k)_{02}(1.12) = -0.2200$ |
| $J_{02}^*(1.14) = 0.3121$ | $u^*(k)_{02}(1.14) = -0.2200$ |
| $J_{02}^*(1.11) = 0.2968$ | $u^*(k)_{02}(1.11) = -0.2200$ |
| $J_{02}^*(1.13) = 0.3077$ | $u^*(k)_{02}(1.13) = -0.2200$ |
| $J_{02}^*(1.15) = 0.3188$ | $u^*(k)_{02}(1.15) = -0.2400$ |
| $J_{02}^*(1.12) = 0.3033$ | $u^*(k)_{02}(1.12) = -0.2200$ |
| $J_{02}^*(1.14) = 0.3143$ | $u^*(k)_{02}(1.14) = -0.2200$ |
| $J_{02}^*(1.16) = 0.3253$ | $u^*(k)_{02}(1.16) = -0.2400$ |
| $J_{02}^*(1.14) = 0.3099$ | $u^*(k)_{02}(1.14) = -0.2200$ |
| $J_{02}^*(1.16) = 0.3210$ | $u^*(k)_{02}(1.16) = -0.2400$ |
| $J_{02}^*(1.18) = 0.3320$ | $u^*(k)_{02}(1.18) = -0.2400$ |
| $J_{02}^*(1.15) = 0.3166$ | $u^*(k)_{02}(1.15) = -0.2200$ |
| $J_{02}^*(1.17) = 0.3275$ | $u^*(k)_{02}(1.17) = -0.2400$ |
| $J_{02}^*(1.19) = 0.3387$ | $u^*(k)_{02}(1.19) = -0.2400$ |
| $J_{02}^*(1.16) = 0.3231$ | $u^*(k)_{02}(1.16) = -0.2400$ |
| $J_{02}^*(1.18) = 0.3342$ | $u^*(k)_{02}(1.18) = -0.2400$ |
| $J_{02}^*(1.20) = 0.3456$ | $u^*(k)_{02}(1.20) = -0.2400$ |
| $J_{02}^*(1.17) = 0.3298$ | $u^*(k)_{02}(1.17) = -0.2400$ |
| $J_{02}^*(1.19) = 0.3410$ | $u^*(k)_{02}(1.19) = -0.2400$ |
| $J_{02}^*(1.21) = 0.3526$ | $u^*(k)_{02}(1.21) = -0.2400$ |
| $J_{02}^*(1.18) = 0.3365$ | $u^*(k)_{02}(1.18) = -0.2400$ |
| $J_{02}^*(1.20) = 0.3479$ | $u^*(k)_{02}(1.20) = -0.2400$ |
| $J_{02}^*(1.22) = 0.3596$ | $u^*(k)_{02}(1.22) = -0.2400$ |
| $J_{02}^*(1.20) = 0.3433$ | $u^*(k)_{02}(1.20) = -0.2400$ |
| $J_{02}^*(1.22) = 0.3549$ | $u^*(k)_{02}(1.22) = -0.2400$ |
| $J_{02}^*(1.24) = 0.3668$ | $u^*(k)_{02}(1.24) = -0.2400$ |
| $J_{02}^*(1.21) = 0.3502$ | $u^*(k)_{02}(1.21) = -0.2400$ |
| $J_{02}^*(1.23) = 0.3620$ | $u^*(k)_{02}(1.23) = -0.2400$ |
| $J_{02}^*(1.25) = 0.3741$ | $u^*(k)_{02}(1.25) = -0.2400$ |
| $J_{02}^*(1.22) = 0.3573$ | $u^*(k)_{02}(1.22) = -0.2400$ |
| $J_{02}^*(1.24) = 0.3692$ | $u^*(k)_{02}(1.24) = -0.2400$ |
| $J_{02}^*(1.26) = 0.3812$ | $u^*(k)_{02}(1.26) = -0.2600$ |
| $J_{02}^*(1.23) = 0.3644$ | $u^*(k)_{02}(1.23) = -0.2400$ |
| $J_{02}^*(1.25) = 0.3765$ | $u^*(k)_{02}(1.25) = -0.2600$ |
| $J_{02}^*(1.27) = 0.3884$ | $u^*(k)_{02}(1.27) = -0.2600$ |
| $J_{02}^*(1.24) = 0.3716$ | $u^*(k)_{02}(1.24) = -0.2400$ |
| $J_{02}^*(1.26) = 0.3836$ | $u^*(k)_{02}(1.26) = -0.2600$ |
| $J_{02}^*(1.28) = 0.3957$ | $u^*(k)_{02}(1.28) = -0.2600$ |
| $J_{02}^*(1.26) = 0.3788$ | $u^*(k)_{02}(1.26) = -0.2600$ |
| $J_{02}^*(1.28) = 0.3908$ | $u^*(k)_{02}(1.28) = -0.2600$ |
| $J_{02}^*(1.30) = 0.4031$ | $u^*(k)_{02}(1.30) = -0.2600$ |
| $J_{02}^*(1.27) = 0.3860$ | $u^*(k)_{02}(1.27) = -0.2600$ |
| $J_{02}^*(1.29) = 0.3982$ | $u^*(k)_{02}(1.29) = -0.2600$ |
| $J_{02}^*(1.31) = 0.4106$ | $u^*(k)_{02}(1.31) = -0.2600$ |
| $J_{02}^*(1.28) = 0.3933$ | $u^*(k)_{02}(1.28) = -0.2600$ |
| $J_{02}^*(1.30) = 0.4056$ | $u^*(k)_{02}(1.30) = -0.2600$ |
| $J_{02}^*(1.32) = 0.4182$ | $u^*(k)_{02}(1.32) = -0.2600$ |



|                           |                               |
|---------------------------|-------------------------------|
| $J_{02}^*(1.29) = 0.4006$ | $u^*(k)_{02}(1.29) = -0.2600$ |
| $J_{02}^*(1.31) = 0.4131$ | $u^*(k)_{02}(1.31) = -0.2600$ |
| $J_{02}^*(1.33) = 0.4259$ | $u^*(k)_{02}(1.33) = -0.2600$ |
| $J_{02}^*(1.30) = 0.4081$ | $u^*(k)_{02}(1.30) = -0.2600$ |
| $J_{02}^*(1.32) = 0.4208$ | $u^*(k)_{02}(1.32) = -0.2600$ |
| $J_{02}^*(1.34) = 0.4338$ | $u^*(k)_{02}(1.34) = -0.2600$ |
| $J_{02}^*(1.32) = 0.4157$ | $u^*(k)_{02}(1.32) = -0.2600$ |
| $J_{02}^*(1.34) = 0.4285$ | $u^*(k)_{02}(1.34) = -0.2600$ |
| $J_{02}^*(1.36) = 0.4415$ | $u^*(k)_{02}(1.36) = -0.2800$ |
| $J_{02}^*(1.33) = 0.4234$ | $u^*(k)_{02}(1.33) = -0.2600$ |
| $J_{02}^*(1.35) = 0.4364$ | $u^*(k)_{02}(1.35) = -0.2600$ |
| $J_{02}^*(1.37) = 0.4493$ | $u^*(k)_{02}(1.37) = -0.2800$ |
| $J_{02}^*(1.34) = 0.4311$ | $u^*(k)_{02}(1.34) = -0.2600$ |
| $J_{02}^*(1.36) = 0.4441$ | $u^*(k)_{02}(1.36) = -0.2800$ |
| $J_{02}^*(1.38) = 0.4571$ | $u^*(k)_{02}(1.38) = -0.2800$ |
| $J_{02}^*(1.35) = 0.4390$ | $u^*(k)_{02}(1.35) = -0.2800$ |
| $J_{02}^*(1.37) = 0.4519$ | $u^*(k)_{02}(1.37) = -0.2800$ |
| $J_{02}^*(1.39) = 0.4650$ | $u^*(k)_{02}(1.39) = -0.2800$ |
| $J_{02}^*(1.36) = 0.4467$ | $u^*(k)_{02}(1.36) = -0.2800$ |
| $J_{02}^*(1.38) = 0.4597$ | $u^*(k)_{02}(1.38) = -0.2800$ |
| $J_{02}^*(1.40) = 0.4731$ | $u^*(k)_{02}(1.40) = -0.2800$ |
| $J_{02}^*(1.38) = 0.4545$ | $u^*(k)_{02}(1.38) = -0.2800$ |
| $J_{02}^*(1.40) = 0.4677$ | $u^*(k)_{02}(1.40) = -0.2800$ |
| $J_{02}^*(1.42) = 0.4812$ | $u^*(k)_{02}(1.42) = -0.2800$ |
| $J_{02}^*(1.39) = 0.4624$ | $u^*(k)_{02}(1.39) = -0.2800$ |
| $J_{02}^*(1.41) = 0.4758$ | $u^*(k)_{02}(1.41) = -0.2800$ |
| $J_{02}^*(1.43) = 0.4895$ | $u^*(k)_{02}(1.43) = -0.2800$ |
| $J_{02}^*(1.40) = 0.4704$ | $u^*(k)_{02}(1.40) = -0.2800$ |
| $J_{02}^*(1.42) = 0.4840$ | $u^*(k)_{02}(1.42) = -0.2800$ |
| $J_{02}^*(1.44) = 0.4979$ | $u^*(k)_{02}(1.44) = -0.2800$ |
| $J_{02}^*(1.41) = 0.4785$ | $u^*(k)_{02}(1.41) = -0.2800$ |
| $J_{02}^*(1.43) = 0.4923$ | $u^*(k)_{02}(1.43) = -0.2800$ |
| $J_{02}^*(1.45) = 0.5063$ | $u^*(k)_{02}(1.45) = -0.3000$ |
| $J_{02}^*(1.42) = 0.4867$ | $u^*(k)_{02}(1.42) = -0.2800$ |
| $J_{02}^*(1.44) = 0.5007$ | $u^*(k)_{02}(1.44) = -0.2800$ |
| $J_{02}^*(1.46) = 0.5145$ | $u^*(k)_{02}(1.46) = -0.3000$ |
| $J_{02}^*(1.44) = 0.4951$ | $u^*(k)_{02}(1.44) = -0.2800$ |
| $J_{02}^*(1.46) = 0.5090$ | $u^*(k)_{02}(1.46) = -0.3000$ |
| $J_{02}^*(1.48) = 0.5229$ | $u^*(k)_{02}(1.48) = -0.3000$ |
| $J_{02}^*(1.45) = 0.5035$ | $u^*(k)_{02}(1.45) = -0.2800$ |
| $J_{02}^*(1.47) = 0.5173$ | $u^*(k)_{02}(1.47) = -0.3000$ |
| $J_{02}^*(1.49) = 0.5314$ | $u^*(k)_{02}(1.49) = -0.3000$ |
| $J_{02}^*(1.46) = 0.5118$ | $u^*(k)_{02}(1.46) = -0.3000$ |
| $J_{02}^*(1.48) = 0.5257$ | $u^*(k)_{02}(1.48) = -0.3000$ |
| $J_{02}^*(1.50) = 0.5400$ | $u^*(k)_{02}(1.50) = -0.3000$ |
| $J_{02}^*(1.47) = 0.5201$ | $u^*(k)_{02}(1.47) = -0.3000$ |
| $J_{02}^*(1.49) = 0.5343$ | $u^*(k)_{02}(1.49) = -0.3000$ |
| $J_{02}^*(1.48) = 0.5286$ | $u^*(k)_{02}(1.48) = -0.3000$ |
| $J_{02}^*(1.50) = 0.5371$ | $u^*(k)_{02}(1.50) = -0.3000$ |
| $J_{12}^*(0.00) = 0.0000$ | $u^*(k)_{13}(0.00) = 0.0000$  |
| $J_{12}^*(0.02) = 0.0001$ | $u^*(k)_{13}(0.02) = 0.0000$  |
| $J_{12}^*(0.04) = 0.0002$ | $u^*(k)_{13}(0.04) = 0.0000$  |
| $J_{12}^*(0.06) = 0.0005$ | $u^*(k)_{13}(0.06) = 0.0000$  |
| $J_{12}^*(0.08) = 0.0008$ | $u^*(k)_{13}(0.08) = 0.0000$  |

|                           |                               |
|---------------------------|-------------------------------|
| $J_{12}^*(0.10) = 0.0011$ | $u^*(k)_{13}(0.10) = 0.0000$  |
| $J_{12}^*(0.12) = 0.0013$ | $u^*(k)_{13}(0.12) = 0.0000$  |
| $J_{12}^*(0.14) = 0.0017$ | $u^*(k)_{13}(0.14) = 0.0000$  |
| $J_{12}^*(0.16) = 0.0022$ | $u^*(k)_{13}(0.16) = 0.0000$  |
| $J_{12}^*(0.18) = 0.0027$ | $u^*(k)_{13}(0.18) = -0.0200$ |
| $J_{12}^*(0.20) = 0.0032$ | $u^*(k)_{13}(0.20) = -0.0200$ |
| $J_{12}^*(0.22) = 0.0038$ | $u^*(k)_{13}(0.22) = -0.0200$ |
| $J_{12}^*(0.24) = 0.0046$ | $u^*(k)_{13}(0.24) = -0.0200$ |
| $J_{12}^*(0.26) = 0.0054$ | $u^*(k)_{13}(0.26) = -0.0200$ |
| $J_{12}^*(0.28) = 0.0063$ | $u^*(k)_{13}(0.28) = -0.0200$ |
| $J_{12}^*(0.30) = 0.0071$ | $u^*(k)_{13}(0.30) = -0.0200$ |
| $J_{12}^*(0.32) = 0.0080$ | $u^*(k)_{13}(0.32) = -0.0200$ |
| $J_{12}^*(0.34) = 0.0090$ | $u^*(k)_{13}(0.34) = -0.0200$ |
| $J_{12}^*(0.36) = 0.0100$ | $u^*(k)_{13}(0.36) = -0.0200$ |
| $J_{12}^*(0.38) = 0.0112$ | $u^*(k)_{13}(0.38) = -0.0200$ |
| $J_{12}^*(0.40) = 0.0125$ | $u^*(k)_{13}(0.40) = -0.0200$ |
| $J_{12}^*(0.42) = 0.0138$ | $u^*(k)_{13}(0.42) = -0.0200$ |
| $J_{12}^*(0.44) = 0.0153$ | $u^*(k)_{13}(0.44) = -0.0400$ |
| $J_{12}^*(0.46) = 0.0167$ | $u^*(k)_{13}(0.46) = -0.0400$ |
| $J_{12}^*(0.48) = 0.0182$ | $u^*(k)_{13}(0.48) = -0.0200$ |
| $J_{12}^*(0.50) = 0.0196$ | $u^*(k)_{13}(0.50) = -0.0400$ |
| $J_{12}^*(0.52) = 0.0211$ | $u^*(k)_{13}(0.52) = -0.0400$ |
| $J_{12}^*(0.54) = 0.0226$ | $u^*(k)_{13}(0.54) = -0.0400$ |
| $J_{12}^*(0.56) = 0.0242$ | $u^*(k)_{13}(0.56) = -0.0400$ |
| $J_{12}^*(0.58) = 0.0260$ | $u^*(k)_{13}(0.58) = -0.0400$ |
| $J_{12}^*(0.60) = 0.0278$ | $u^*(k)_{13}(0.60) = -0.0400$ |
| $J_{12}^*(0.62) = 0.0298$ | $u^*(k)_{13}(0.62) = -0.0400$ |
| $J_{12}^*(0.64) = 0.0318$ | $u^*(k)_{13}(0.64) = -0.0400$ |
| $J_{12}^*(0.66) = 0.0338$ | $u^*(k)_{13}(0.66) = -0.0400$ |
| $J_{12}^*(0.68) = 0.0358$ | $u^*(k)_{13}(0.68) = -0.0400$ |
| $J_{12}^*(0.70) = 0.0379$ | $u^*(k)_{13}(0.70) = -0.0400$ |
| $J_{12}^*(0.72) = 0.0401$ | $u^*(k)_{13}(0.72) = -0.0400$ |
| $J_{12}^*(0.74) = 0.0424$ | $u^*(k)_{13}(0.74) = -0.0400$ |
| $J_{12}^*(0.76) = 0.0448$ | $u^*(k)_{13}(0.76) = -0.0400$ |
| $J_{12}^*(0.78) = 0.0472$ | $u^*(k)_{13}(0.78) = -0.0600$ |
| $J_{12}^*(0.80) = 0.0496$ | $u^*(k)_{13}(0.80) = -0.0600$ |
| $J_{12}^*(0.82) = 0.0521$ | $u^*(k)_{13}(0.82) = -0.0600$ |
| $J_{12}^*(0.84) = 0.0547$ | $u^*(k)_{13}(0.84) = -0.0600$ |
| $J_{12}^*(0.86) = 0.0573$ | $u^*(k)_{13}(0.86) = -0.0600$ |
| $J_{12}^*(0.88) = 0.0599$ | $u^*(k)_{13}(0.88) = -0.0600$ |
| $J_{12}^*(0.90) = 0.0625$ | $u^*(k)_{13}(0.90) = -0.0600$ |
| $J_{12}^*(0.92) = 0.0653$ | $u^*(k)_{13}(0.92) = -0.0600$ |
| $J_{12}^*(0.94) = 0.0682$ | $u^*(k)_{13}(0.94) = -0.0600$ |
| $J_{12}^*(0.96) = 0.0711$ | $u^*(k)_{13}(0.96) = -0.0600$ |
| $J_{12}^*(0.98) = 0.0742$ | $u^*(k)_{13}(0.98) = -0.0600$ |
| $J_{12}^*(1.00) = 0.0774$ | $u^*(k)_{13}(1.00) = -0.0600$ |
| $J_{12}^*(1.02) = 0.0806$ | $u^*(k)_{13}(1.02) = -0.0600$ |
| $J_{12}^*(1.04) = 0.0837$ | $u^*(k)_{13}(1.04) = -0.0600$ |
| $J_{12}^*(1.06) = 0.0869$ | $u^*(k)_{13}(1.06) = -0.0600$ |
| $J_{12}^*(1.08) = 0.0902$ | $u^*(k)_{13}(1.08) = -0.0600$ |
| $J_{12}^*(1.10) = 0.0936$ | $u^*(k)_{13}(1.10) = -0.0800$ |
| $J_{12}^*(1.12) = 0.0969$ | $u^*(k)_{13}(1.12) = -0.0800$ |
| $J_{12}^*(1.14) = 0.1004$ | $u^*(k)_{13}(1.14) = -0.0800$ |
| $J_{12}^*(1.16) = 0.1039$ | $u^*(k)_{13}(1.16) = -0.0800$ |

|                           |                               |
|---------------------------|-------------------------------|
| $J_{12}^*(1.18) = 0.1075$ | $u^*(k)_{13}(1.18) = -0.0800$ |
| $J_{12}^*(1.20) = 0.1113$ | $u^*(k)_{13}(1.20) = -0.0800$ |
| $J_{12}^*(1.22) = 0.1151$ | $u^*(k)_{13}(1.22) = -0.0800$ |
| $J_{12}^*(1.24) = 0.1188$ | $u^*(k)_{13}(1.24) = -0.0800$ |
| $J_{12}^*(1.26) = 0.1225$ | $u^*(k)_{13}(1.26) = -0.0800$ |
| $J_{12}^*(1.28) = 0.1264$ | $u^*(k)_{13}(1.28) = -0.0800$ |
| $J_{12}^*(1.30) = 0.1304$ | $u^*(k)_{13}(1.30) = -0.0800$ |
| $J_{12}^*(1.32) = 0.1345$ | $u^*(k)_{13}(1.32) = -0.0800$ |
| $J_{12}^*(1.34) = 0.1387$ | $u^*(k)_{13}(1.34) = -0.0800$ |
| $J_{12}^*(1.36) = 0.1430$ | $u^*(k)_{13}(1.36) = -0.0800$ |
| $J_{12}^*(1.38) = 0.1473$ | $u^*(k)_{13}(1.38) = -0.1000$ |
| $J_{12}^*(1.40) = 0.1516$ | $u^*(k)_{13}(1.40) = -0.0800$ |
| $J_{12}^*(1.42) = 0.1559$ | $u^*(k)_{13}(1.42) = -0.0800$ |
| $J_{12}^*(1.44) = 0.1602$ | $u^*(k)_{13}(1.44) = -0.1000$ |
| $J_{12}^*(1.46) = 0.1646$ | $u^*(k)_{13}(1.46) = -0.1000$ |
| $J_{12}^*(1.48) = 0.1690$ | $u^*(k)_{13}(1.48) = -0.1000$ |
| $J_{12}^*(1.50) = 0.1736$ | $u^*(k)_{13}(1.50) = -0.1000$ |

### 3-16 Part (b)

|                           |                               |
|---------------------------|-------------------------------|
| $J_{02}^*(0.00) = 0.0000$ | $u^*(k)_{02}(0.00) = 0.0000$  |
| $J_{02}^*(0.02) = 0.0001$ | $u^*(k)_{02}(0.02) = 0.0000$  |
| $J_{02}^*(0.04) = 0.0006$ | $u^*(k)_{02}(0.04) = 0.0000$  |
| $J_{02}^*(0.06) = 0.0011$ | $u^*(k)_{02}(0.06) = -0.0200$ |
| $J_{02}^*(0.08) = 0.0016$ | $u^*(k)_{02}(0.08) = -0.0200$ |
| $J_{02}^*(0.10) = 0.0024$ | $u^*(k)_{02}(0.10) = -0.0200$ |
| $J_{02}^*(0.12) = 0.0035$ | $u^*(k)_{02}(0.12) = -0.0200$ |
| $J_{02}^*(0.14) = 0.0049$ | $u^*(k)_{02}(0.14) = -0.0200$ |
| $J_{02}^*(0.16) = 0.0063$ | $u^*(k)_{02}(0.16) = -0.0400$ |
| $J_{02}^*(0.18) = 0.0078$ | $u^*(k)_{02}(0.18) = -0.0400$ |
| $J_{02}^*(0.20) = 0.0096$ | $u^*(k)_{02}(0.20) = -0.0400$ |
| $J_{02}^*(0.22) = 0.0117$ | $u^*(k)_{02}(0.22) = -0.0400$ |
| $J_{02}^*(0.24) = 0.0140$ | $u^*(k)_{02}(0.24) = -0.0400$ |
| $J_{02}^*(0.26) = 0.0164$ | $u^*(k)_{02}(0.26) = -0.0600$ |
| $J_{02}^*(0.28) = 0.0189$ | $u^*(k)_{02}(0.28) = -0.0600$ |
| $J_{02}^*(0.30) = 0.0216$ | $u^*(k)_{02}(0.30) = -0.0600$ |
| $J_{02}^*(0.32) = 0.0246$ | $u^*(k)_{02}(0.32) = -0.0600$ |
| $J_{02}^*(0.34) = 0.0279$ | $u^*(k)_{02}(0.34) = -0.0600$ |
| $J_{02}^*(0.36) = 0.0313$ | $u^*(k)_{02}(0.36) = -0.0800$ |
| $J_{02}^*(0.38) = 0.0347$ | $u^*(k)_{02}(0.38) = -0.0800$ |
| $J_{02}^*(0.40) = 0.0384$ | $u^*(k)_{02}(0.40) = -0.0800$ |
| $J_{02}^*(0.42) = 0.0424$ | $u^*(k)_{02}(0.42) = -0.0800$ |
| $J_{02}^*(0.44) = 0.0467$ | $u^*(k)_{02}(0.44) = -0.0800$ |
| $J_{02}^*(0.46) = 0.0510$ | $u^*(k)_{02}(0.46) = -0.1000$ |
| $J_{02}^*(0.48) = 0.0553$ | $u^*(k)_{02}(0.48) = -0.1000$ |
| $J_{02}^*(0.50) = 0.0600$ | $u^*(k)_{02}(0.50) = -0.1000$ |
| $J_{02}^*(0.52) = 0.0649$ | $u^*(k)_{02}(0.52) = -0.1000$ |
| $J_{02}^*(0.54) = 0.0702$ | $u^*(k)_{02}(0.54) = -0.1000$ |
| $J_{02}^*(0.56) = 0.0755$ | $u^*(k)_{02}(0.56) = -0.1200$ |
| $J_{02}^*(0.58) = 0.0808$ | $u^*(k)_{02}(0.58) = -0.1200$ |
| $J_{02}^*(0.60) = 0.0864$ | $u^*(k)_{02}(0.60) = -0.1200$ |
| $J_{02}^*(0.62) = 0.0923$ | $u^*(k)_{02}(0.62) = -0.1200$ |
| $J_{02}^*(0.64) = 0.0985$ | $u^*(k)_{02}(0.64) = -0.1200$ |
| $J_{02}^*(0.66) = 0.1047$ | $u^*(k)_{02}(0.66) = -0.1400$ |

|                           |                               |
|---------------------------|-------------------------------|
| $J_{02}^*(0.68) = 0.1110$ | $u^*(k)_{02}(0.68) = -0.1400$ |
| $J_{02}^*(0.70) = 0.1176$ | $u^*(k)_{02}(0.70) = -0.1400$ |
| $J_{02}^*(0.72) = 0.1245$ | $u^*(k)_{02}(0.72) = -0.1400$ |
| $J_{02}^*(0.74) = 0.1316$ | $u^*(k)_{02}(0.74) = -0.1400$ |
| $J_{02}^*(0.76) = 0.1388$ | $u^*(k)_{02}(0.76) = -0.1600$ |
| $J_{02}^*(0.78) = 0.1461$ | $u^*(k)_{02}(0.78) = -0.1600$ |
| $J_{02}^*(0.80) = 0.1536$ | $u^*(k)_{02}(0.80) = -0.1600$ |
| $J_{02}^*(0.82) = 0.1614$ | $u^*(k)_{02}(0.82) = -0.1600$ |
| $J_{02}^*(0.84) = 0.1695$ | $u^*(k)_{02}(0.84) = -0.1600$ |
| $J_{02}^*(0.86) = 0.1777$ | $u^*(k)_{02}(0.86) = -0.1800$ |
| $J_{02}^*(0.88) = 0.1859$ | $u^*(k)_{02}(0.88) = -0.1800$ |
| $J_{02}^*(0.90) = 0.1944$ | $u^*(k)_{02}(0.90) = -0.1800$ |
| $J_{02}^*(0.92) = 0.2032$ | $u^*(k)_{02}(0.92) = -0.1800$ |
| $J_{02}^*(0.94) = 0.2123$ | $u^*(k)_{02}(0.94) = -0.1800$ |
| $J_{02}^*(0.96) = 0.2214$ | $u^*(k)_{02}(0.96) = -0.2000$ |
| $J_{02}^*(0.98) = 0.2305$ | $u^*(k)_{02}(0.98) = -0.2000$ |
| $J_{02}^*(1.00) = 0.2400$ | $u^*(k)_{02}(1.00) = -0.2000$ |
| $J_{02}^*(1.02) = 0.2497$ | $u^*(k)_{02}(1.02) = -0.2000$ |
| $J_{02}^*(1.04) = 0.2598$ | $u^*(k)_{02}(1.04) = -0.2000$ |
| $J_{02}^*(1.06) = 0.2699$ | $u^*(k)_{02}(1.06) = -0.2200$ |
| $J_{02}^*(1.08) = 0.2800$ | $u^*(k)_{02}(1.08) = -0.2200$ |
| $J_{02}^*(0.01) = 0.0001$ | $u^*(k)_{02}(0.01) = 0.0000$  |
| $J_{02}^*(0.03) = 0.0004$ | $u^*(k)_{02}(0.03) = 0.0000$  |
| $J_{02}^*(0.05) = 0.0009$ | $u^*(k)_{02}(0.05) = -0.0200$ |
| $J_{02}^*(0.07) = 0.0013$ | $u^*(k)_{02}(0.07) = -0.0200$ |
| $J_{02}^*(0.09) = 0.0020$ | $u^*(k)_{02}(0.09) = -0.0200$ |
| $J_{02}^*(0.11) = 0.0030$ | $u^*(k)_{02}(0.11) = -0.0200$ |
| $J_{02}^*(0.13) = 0.0043$ | $u^*(k)_{02}(0.13) = -0.0200$ |
| $J_{02}^*(0.15) = 0.0058$ | $u^*(k)_{02}(0.15) = -0.0400$ |
| $J_{02}^*(0.17) = 0.0072$ | $u^*(k)_{02}(0.17) = -0.0400$ |
| $J_{02}^*(0.19) = 0.0089$ | $u^*(k)_{02}(0.19) = -0.0400$ |
| $J_{02}^*(0.21) = 0.0108$ | $u^*(k)_{02}(0.21) = -0.0400$ |
| $J_{02}^*(0.23) = 0.0130$ | $u^*(k)_{02}(0.23) = -0.0400$ |
| $J_{02}^*(0.25) = 0.0155$ | $u^*(k)_{02}(0.25) = -0.0600$ |
| $J_{02}^*(0.27) = 0.0179$ | $u^*(k)_{02}(0.27) = -0.0600$ |
| $J_{02}^*(0.29) = 0.0205$ | $u^*(k)_{02}(0.29) = -0.0600$ |
| $J_{02}^*(0.31) = 0.0234$ | $u^*(k)_{02}(0.31) = -0.0600$ |
| $J_{02}^*(0.33) = 0.0266$ | $u^*(k)_{02}(0.33) = -0.0600$ |
| $J_{02}^*(0.35) = 0.0300$ | $u^*(k)_{02}(0.35) = -0.0800$ |
| $J_{02}^*(0.37) = 0.0333$ | $u^*(k)_{02}(0.37) = -0.0800$ |
| $J_{02}^*(0.39) = 0.0369$ | $u^*(k)_{02}(0.39) = -0.0800$ |
| $J_{02}^*(0.41) = 0.0408$ | $u^*(k)_{02}(0.41) = -0.0800$ |
| $J_{02}^*(0.43) = 0.0449$ | $u^*(k)_{02}(0.43) = -0.0800$ |
| $J_{02}^*(0.45) = 0.0493$ | $u^*(k)_{02}(0.45) = -0.1000$ |
| $J_{02}^*(0.47) = 0.0536$ | $u^*(k)_{02}(0.47) = -0.1000$ |
| $J_{02}^*(0.49) = 0.0581$ | $u^*(k)_{02}(0.49) = -0.1000$ |
| $J_{02}^*(0.51) = 0.0629$ | $u^*(k)_{02}(0.51) = -0.1000$ |
| $J_{02}^*(0.53) = 0.0680$ | $u^*(k)_{02}(0.53) = -0.1000$ |
| $J_{02}^*(0.55) = 0.0734$ | $u^*(k)_{02}(0.55) = -0.1200$ |
| $J_{02}^*(0.57) = 0.0786$ | $u^*(k)_{02}(0.57) = -0.1200$ |
| $J_{02}^*(0.59) = 0.0841$ | $u^*(k)_{02}(0.59) = -0.1200$ |
| $J_{02}^*(0.61) = 0.0899$ | $u^*(k)_{02}(0.61) = -0.1200$ |
| $J_{02}^*(0.63) = 0.0960$ | $u^*(k)_{02}(0.63) = -0.1200$ |
| $J_{02}^*(0.65) = 0.1023$ | $u^*(k)_{02}(0.65) = -0.1400$ |

|                           |                               |
|---------------------------|-------------------------------|
| $J_{02}^*(0.67) = 0.1085$ | $u^*(k)_{02}(0.67) = -0.1400$ |
| $J_{02}^*(0.69) = 0.1149$ | $u^*(k)_{02}(0.69) = -0.1400$ |
| $J_{02}^*(0.71) = 0.1217$ | $u^*(k)_{02}(0.71) = -0.1400$ |
| $J_{02}^*(0.73) = 0.1287$ | $u^*(k)_{02}(0.73) = -0.1400$ |
| $J_{02}^*(0.75) = 0.1360$ | $u^*(k)_{02}(0.75) = -0.1600$ |
| $J_{02}^*(0.77) = 0.1431$ | $u^*(k)_{02}(0.77) = -0.1600$ |
| $J_{02}^*(0.79) = 0.1506$ | $u^*(k)_{02}(0.79) = -0.1600$ |
| $J_{02}^*(0.81) = 0.1583$ | $u^*(k)_{02}(0.81) = -0.1600$ |
| $J_{02}^*(0.83) = 0.1663$ | $u^*(k)_{02}(0.83) = -0.1600$ |
| $J_{02}^*(0.85) = 0.1745$ | $u^*(k)_{02}(0.85) = -0.1800$ |
| $J_{02}^*(0.87) = 0.1826$ | $u^*(k)_{02}(0.87) = -0.1800$ |
| $J_{02}^*(0.89) = 0.1910$ | $u^*(k)_{02}(0.89) = -0.1800$ |
| $J_{02}^*(0.91) = 0.1996$ | $u^*(k)_{02}(0.91) = -0.1800$ |
| $J_{02}^*(0.93) = 0.2086$ | $u^*(k)_{02}(0.93) = -0.1800$ |
| $J_{02}^*(0.95) = 0.2178$ | $u^*(k)_{02}(0.95) = -0.2000$ |
| $J_{02}^*(0.97) = 0.2268$ | $u^*(k)_{02}(0.97) = -0.2000$ |
| $J_{02}^*(0.99) = 0.2362$ | $u^*(k)_{02}(0.99) = -0.2000$ |
| $J_{02}^*(1.01) = 0.2458$ | $u^*(k)_{02}(1.01) = -0.2000$ |
| $J_{02}^*(1.03) = 0.2557$ | $u^*(k)_{02}(1.03) = -0.2000$ |
| $J_{02}^*(1.05) = 0.2659$ | $u^*(k)_{02}(1.05) = -0.2200$ |
| $J_{02}^*(1.07) = 0.2759$ | $u^*(k)_{02}(1.07) = -0.2200$ |
| $J_{02}^*(1.09) = 0.2862$ | $u^*(k)_{02}(1.09) = -0.2200$ |
| $J_{02}^*(0.00) = 0.0000$ | $u^*(k)_{02}(0.00) = 0.0000$  |
| $J_{02}^*(0.02) = 0.0002$ | $u^*(k)_{02}(0.02) = 0.0000$  |
| $J_{02}^*(0.04) = 0.0007$ | $u^*(k)_{02}(0.04) = 0.0000$  |
| $J_{02}^*(0.06) = 0.0011$ | $u^*(k)_{02}(0.06) = -0.0200$ |
| $J_{02}^*(0.08) = 0.0017$ | $u^*(k)_{02}(0.08) = -0.0200$ |
| $J_{02}^*(0.10) = 0.0026$ | $u^*(k)_{02}(0.10) = -0.0200$ |
| $J_{02}^*(0.12) = 0.0038$ | $u^*(k)_{02}(0.12) = -0.0200$ |
| $J_{02}^*(0.14) = 0.0052$ | $u^*(k)_{02}(0.14) = -0.0200$ |
| $J_{02}^*(0.16) = 0.0066$ | $u^*(k)_{02}(0.16) = -0.0400$ |
| $J_{02}^*(0.18) = 0.0082$ | $u^*(k)_{02}(0.18) = -0.0400$ |
| $J_{02}^*(0.20) = 0.0100$ | $u^*(k)_{02}(0.20) = -0.0400$ |
| $J_{02}^*(0.22) = 0.0121$ | $u^*(k)_{02}(0.22) = -0.0400$ |
| $J_{02}^*(0.24) = 0.0145$ | $u^*(k)_{02}(0.24) = -0.0400$ |
| $J_{02}^*(0.26) = 0.0169$ | $u^*(k)_{02}(0.26) = -0.0600$ |
| $J_{02}^*(0.28) = 0.0194$ | $u^*(k)_{02}(0.28) = -0.0600$ |
| $J_{02}^*(0.30) = 0.0222$ | $u^*(k)_{02}(0.30) = -0.0600$ |
| $J_{02}^*(0.32) = 0.0253$ | $u^*(k)_{02}(0.32) = -0.0600$ |
| $J_{02}^*(0.34) = 0.0286$ | $u^*(k)_{02}(0.34) = -0.0600$ |
| $J_{02}^*(0.36) = 0.0320$ | $u^*(k)_{02}(0.36) = -0.0800$ |
| $J_{02}^*(0.38) = 0.0354$ | $u^*(k)_{02}(0.38) = -0.0800$ |
| $J_{02}^*(0.40) = 0.0392$ | $u^*(k)_{02}(0.40) = -0.0800$ |
| $J_{02}^*(0.42) = 0.0432$ | $u^*(k)_{02}(0.42) = -0.0800$ |
| $J_{02}^*(0.44) = 0.0475$ | $u^*(k)_{02}(0.44) = -0.0800$ |
| $J_{02}^*(0.46) = 0.0518$ | $u^*(k)_{02}(0.46) = -0.1000$ |
| $J_{02}^*(0.48) = 0.0563$ | $u^*(k)_{02}(0.48) = -0.1000$ |
| $J_{02}^*(0.50) = 0.0610$ | $u^*(k)_{02}(0.50) = -0.1000$ |
| $J_{02}^*(0.52) = 0.0660$ | $u^*(k)_{02}(0.52) = -0.1000$ |
| $J_{02}^*(0.54) = 0.0713$ | $u^*(k)_{02}(0.54) = -0.1000$ |
| $J_{02}^*(0.56) = 0.0765$ | $u^*(k)_{02}(0.56) = -0.1200$ |
| $J_{02}^*(0.58) = 0.0819$ | $u^*(k)_{02}(0.58) = -0.1200$ |
| $J_{02}^*(0.60) = 0.0876$ | $u^*(k)_{02}(0.60) = -0.1200$ |
| $J_{02}^*(0.62) = 0.0935$ | $u^*(k)_{02}(0.62) = -0.1200$ |

|                           |                               |
|---------------------------|-------------------------------|
| $J_{02}^*(0.64) = 0.0998$ | $u^*(k)_{02}(0.64) = -0.1200$ |
| $J_{02}^*(0.66) = 0.1060$ | $u^*(k)_{02}(0.66) = -0.1400$ |
| $J_{02}^*(0.68) = 0.1123$ | $u^*(k)_{02}(0.68) = -0.1400$ |
| $J_{02}^*(0.70) = 0.1189$ | $u^*(k)_{02}(0.70) = -0.1400$ |
| $J_{02}^*(0.72) = 0.1259$ | $u^*(k)_{02}(0.72) = -0.1400$ |
| $J_{02}^*(0.74) = 0.1331$ | $u^*(k)_{02}(0.74) = -0.1400$ |
| $J_{02}^*(0.76) = 0.1402$ | $u^*(k)_{02}(0.76) = -0.1600$ |
| $J_{02}^*(0.78) = 0.1475$ | $u^*(k)_{02}(0.78) = -0.1600$ |
| $J_{02}^*(0.80) = 0.1551$ | $u^*(k)_{02}(0.80) = -0.1600$ |
| $J_{02}^*(0.82) = 0.1630$ | $u^*(k)_{02}(0.82) = -0.1600$ |
| $J_{02}^*(0.84) = 0.1712$ | $u^*(k)_{02}(0.84) = -0.1600$ |
| $J_{02}^*(0.86) = 0.1793$ | $u^*(k)_{02}(0.86) = -0.1800$ |
| $J_{02}^*(0.88) = 0.1876$ | $u^*(k)_{02}(0.88) = -0.1800$ |
| $J_{02}^*(0.90) = 0.1961$ | $u^*(k)_{02}(0.90) = -0.1800$ |
| $J_{02}^*(0.92) = 0.2050$ | $u^*(k)_{02}(0.92) = -0.1800$ |
| $J_{02}^*(0.94) = 0.2141$ | $u^*(k)_{02}(0.94) = -0.1800$ |
| $J_{02}^*(0.96) = 0.2232$ | $u^*(k)_{02}(0.96) = -0.2000$ |
| $J_{02}^*(0.98) = 0.2324$ | $u^*(k)_{02}(0.98) = -0.2000$ |
| $J_{02}^*(1.00) = 0.2419$ | $u^*(k)_{02}(1.00) = -0.2000$ |
| $J_{02}^*(1.02) = 0.2517$ | $u^*(k)_{02}(1.02) = -0.2000$ |
| $J_{02}^*(1.04) = 0.2618$ | $u^*(k)_{02}(1.04) = -0.2000$ |
| $J_{02}^*(1.06) = 0.2719$ | $u^*(k)_{02}(1.06) = -0.2200$ |
| $J_{02}^*(1.08) = 0.2820$ | $u^*(k)_{02}(1.08) = -0.2200$ |
| $J_{02}^*(1.10) = 0.2925$ | $u^*(k)_{02}(1.10) = -0.2200$ |
| $J_{02}^*(0.02) = 0.0001$ | $u^*(k)_{02}(0.02) = 0.0000$  |
| $J_{02}^*(0.04) = 0.0005$ | $u^*(k)_{02}(0.04) = 0.0000$  |
| $J_{02}^*(0.06) = 0.0010$ | $u^*(k)_{02}(0.06) = -0.0200$ |
| $J_{02}^*(0.08) = 0.0015$ | $u^*(k)_{02}(0.08) = -0.0200$ |
| $J_{02}^*(0.10) = 0.0022$ | $u^*(k)_{02}(0.10) = -0.0200$ |
| $J_{02}^*(0.12) = 0.0033$ | $u^*(k)_{02}(0.12) = -0.0200$ |
| $J_{02}^*(0.14) = 0.0046$ | $u^*(k)_{02}(0.14) = -0.0200$ |
| $J_{02}^*(0.16) = 0.0061$ | $u^*(k)_{02}(0.16) = -0.0400$ |
| $J_{02}^*(0.18) = 0.0075$ | $u^*(k)_{02}(0.18) = -0.0400$ |
| $J_{02}^*(0.20) = 0.0092$ | $u^*(k)_{02}(0.20) = -0.0400$ |
| $J_{02}^*(0.22) = 0.0112$ | $u^*(k)_{02}(0.22) = -0.0400$ |
| $J_{02}^*(0.24) = 0.0135$ | $u^*(k)_{02}(0.24) = -0.0400$ |
| $J_{02}^*(0.26) = 0.0160$ | $u^*(k)_{02}(0.26) = -0.0600$ |
| $J_{02}^*(0.28) = 0.0184$ | $u^*(k)_{02}(0.28) = -0.0600$ |
| $J_{02}^*(0.30) = 0.0210$ | $u^*(k)_{02}(0.30) = -0.0600$ |
| $J_{02}^*(0.32) = 0.0240$ | $u^*(k)_{02}(0.32) = -0.0600$ |
| $J_{02}^*(0.34) = 0.0273$ | $u^*(k)_{02}(0.34) = -0.0600$ |
| $J_{02}^*(0.36) = 0.0306$ | $u^*(k)_{02}(0.36) = -0.0800$ |
| $J_{02}^*(0.38) = 0.0340$ | $u^*(k)_{02}(0.38) = -0.0800$ |
| $J_{02}^*(0.40) = 0.0376$ | $u^*(k)_{02}(0.40) = -0.0800$ |
| $J_{02}^*(0.42) = 0.0416$ | $u^*(k)_{02}(0.42) = -0.0800$ |
| $J_{02}^*(0.44) = 0.0458$ | $u^*(k)_{02}(0.44) = -0.0800$ |
| $J_{02}^*(0.46) = 0.0501$ | $u^*(k)_{02}(0.46) = -0.1000$ |
| $J_{02}^*(0.48) = 0.0544$ | $u^*(k)_{02}(0.48) = -0.1000$ |
| $J_{02}^*(0.50) = 0.0590$ | $u^*(k)_{02}(0.50) = -0.1000$ |
| $J_{02}^*(0.52) = 0.0639$ | $u^*(k)_{02}(0.52) = -0.1000$ |
| $J_{02}^*(0.54) = 0.0691$ | $u^*(k)_{02}(0.54) = -0.1000$ |
| $J_{02}^*(0.56) = 0.0744$ | $u^*(k)_{02}(0.56) = -0.1200$ |
| $J_{02}^*(0.58) = 0.0797$ | $u^*(k)_{02}(0.58) = -0.1200$ |
| $J_{02}^*(0.60) = 0.0853$ | $u^*(k)_{02}(0.60) = -0.1200$ |

|                           |                               |
|---------------------------|-------------------------------|
| $J_{02}^*(0.62) = 0.0911$ | $u^*(k)_{02}(0.62) = -0.1200$ |
| $J_{02}^*(0.64) = 0.0972$ | $u^*(k)_{02}(0.64) = -0.1200$ |
| $J_{02}^*(0.66) = 0.1035$ | $u^*(k)_{02}(0.66) = -0.1400$ |
| $J_{02}^*(0.68) = 0.1097$ | $u^*(k)_{02}(0.68) = -0.1400$ |
| $J_{02}^*(0.70) = 0.1163$ | $u^*(k)_{02}(0.70) = -0.1400$ |
| $J_{02}^*(0.72) = 0.1231$ | $u^*(k)_{02}(0.72) = -0.1400$ |
| $J_{02}^*(0.74) = 0.1302$ | $u^*(k)_{02}(0.74) = -0.1400$ |
| $J_{02}^*(0.76) = 0.1374$ | $u^*(k)_{02}(0.76) = -0.1600$ |
| $J_{02}^*(0.78) = 0.1446$ | $u^*(k)_{02}(0.78) = -0.1600$ |
| $J_{02}^*(0.80) = 0.1521$ | $u^*(k)_{02}(0.80) = -0.1600$ |
| $J_{02}^*(0.82) = 0.1598$ | $u^*(k)_{02}(0.82) = -0.1600$ |
| $J_{02}^*(0.84) = 0.1679$ | $u^*(k)_{02}(0.84) = -0.1600$ |
| $J_{02}^*(0.86) = 0.1761$ | $u^*(k)_{02}(0.86) = -0.1800$ |
| $J_{02}^*(0.88) = 0.1842$ | $u^*(k)_{02}(0.88) = -0.1800$ |
| $J_{02}^*(0.90) = 0.1927$ | $u^*(k)_{02}(0.90) = -0.1800$ |
| $J_{02}^*(0.92) = 0.2014$ | $u^*(k)_{02}(0.92) = -0.1800$ |
| $J_{02}^*(0.94) = 0.2104$ | $u^*(k)_{02}(0.94) = -0.1800$ |
| $J_{02}^*(0.96) = 0.2196$ | $u^*(k)_{02}(0.96) = -0.2000$ |
| $J_{02}^*(0.98) = 0.2287$ | $u^*(k)_{02}(0.98) = -0.2000$ |
| $J_{02}^*(1.00) = 0.2381$ | $u^*(k)_{02}(1.00) = -0.2000$ |
| $J_{02}^*(1.02) = 0.2478$ | $u^*(k)_{02}(1.02) = -0.2000$ |
| $J_{02}^*(1.04) = 0.2577$ | $u^*(k)_{02}(1.04) = -0.2000$ |
| $J_{02}^*(1.06) = 0.2679$ | $u^*(k)_{02}(1.06) = -0.2200$ |
| $J_{02}^*(1.08) = 0.2779$ | $u^*(k)_{02}(1.08) = -0.2200$ |
| $J_{02}^*(1.10) = 0.2883$ | $u^*(k)_{02}(1.10) = -0.2200$ |
| $J_{02}^*(1.12) = 0.2989$ | $u^*(k)_{02}(1.12) = -0.2200$ |
| $J_{02}^*(0.01) = 0.0000$ | $u^*(k)_{02}(0.01) = 0.0000$  |
| $J_{02}^*(0.03) = 0.0003$ | $u^*(k)_{02}(0.03) = 0.0000$  |
| $J_{02}^*(0.05) = 0.0008$ | $u^*(k)_{02}(0.05) = 0.0000$  |
| $J_{02}^*(0.07) = 0.0012$ | $u^*(k)_{02}(0.07) = -0.0200$ |
| $J_{02}^*(0.09) = 0.0019$ | $u^*(k)_{02}(0.09) = -0.0200$ |
| $J_{02}^*(0.11) = 0.0028$ | $u^*(k)_{02}(0.11) = -0.0200$ |
| $J_{02}^*(0.13) = 0.0040$ | $u^*(k)_{02}(0.13) = -0.0200$ |
| $J_{02}^*(0.15) = 0.0055$ | $u^*(k)_{02}(0.15) = -0.0200$ |
| $J_{02}^*(0.17) = 0.0069$ | $u^*(k)_{02}(0.17) = -0.0400$ |
| $J_{02}^*(0.19) = 0.0085$ | $u^*(k)_{02}(0.19) = -0.0400$ |
| $J_{02}^*(0.21) = 0.0104$ | $u^*(k)_{02}(0.21) = -0.0400$ |
| $J_{02}^*(0.23) = 0.0126$ | $u^*(k)_{02}(0.23) = -0.0400$ |
| $J_{02}^*(0.25) = 0.0150$ | $u^*(k)_{02}(0.25) = -0.0400$ |
| $J_{02}^*(0.27) = 0.0174$ | $u^*(k)_{02}(0.27) = -0.0600$ |
| $J_{02}^*(0.29) = 0.0199$ | $u^*(k)_{02}(0.29) = -0.0600$ |
| $J_{02}^*(0.31) = 0.0228$ | $u^*(k)_{02}(0.31) = -0.0600$ |
| $J_{02}^*(0.33) = 0.0259$ | $u^*(k)_{02}(0.33) = -0.0600$ |
| $J_{02}^*(0.35) = 0.0293$ | $u^*(k)_{02}(0.35) = -0.0600$ |
| $J_{02}^*(0.37) = 0.0326$ | $u^*(k)_{02}(0.37) = -0.0800$ |
| $J_{02}^*(0.39) = 0.0361$ | $u^*(k)_{02}(0.39) = -0.0800$ |
| $J_{02}^*(0.41) = 0.0400$ | $u^*(k)_{02}(0.41) = -0.0800$ |
| $J_{02}^*(0.43) = 0.0441$ | $u^*(k)_{02}(0.43) = -0.0800$ |
| $J_{02}^*(0.45) = 0.0484$ | $u^*(k)_{02}(0.45) = -0.0800$ |
| $J_{02}^*(0.47) = 0.0527$ | $u^*(k)_{02}(0.47) = -0.1000$ |
| $J_{02}^*(0.49) = 0.0572$ | $u^*(k)_{02}(0.49) = -0.1000$ |
| $J_{02}^*(0.51) = 0.0619$ | $u^*(k)_{02}(0.51) = -0.1000$ |
| $J_{02}^*(0.53) = 0.0670$ | $u^*(k)_{02}(0.53) = -0.1000$ |
| $J_{02}^*(0.55) = 0.0723$ | $u^*(k)_{02}(0.55) = -0.1000$ |

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|---------------------------|-------------------------------|
| $J_{02}^*(0.57) = 0.0776$ | $u^*(k)_{02}(0.57) = -0.1200$ |
| $J_{02}^*(0.59) = 0.0830$ | $u^*(k)_{02}(0.59) = -0.1200$ |
| $J_{02}^*(0.61) = 0.0887$ | $u^*(k)_{02}(0.61) = -0.1200$ |
| $J_{02}^*(0.63) = 0.0947$ | $u^*(k)_{02}(0.63) = -0.1200$ |
| $J_{02}^*(0.65) = 0.1011$ | $u^*(k)_{02}(0.65) = -0.1200$ |
| $J_{02}^*(0.67) = 0.1072$ | $u^*(k)_{02}(0.67) = -0.1400$ |
| $J_{02}^*(0.69) = 0.1136$ | $u^*(k)_{02}(0.69) = -0.1400$ |
| $J_{02}^*(0.71) = 0.1203$ | $u^*(k)_{02}(0.71) = -0.1400$ |
| $J_{02}^*(0.73) = 0.1273$ | $u^*(k)_{02}(0.73) = -0.1400$ |
| $J_{02}^*(0.75) = 0.1346$ | $u^*(k)_{02}(0.75) = -0.1400$ |
| $J_{02}^*(0.77) = 0.1417$ | $u^*(k)_{02}(0.77) = -0.1600$ |
| $J_{02}^*(0.79) = 0.1490$ | $u^*(k)_{02}(0.79) = -0.1600$ |
| $J_{02}^*(0.81) = 0.1567$ | $u^*(k)_{02}(0.81) = -0.1600$ |
| $J_{02}^*(0.83) = 0.1646$ | $u^*(k)_{02}(0.83) = -0.1600$ |
| $J_{02}^*(0.85) = 0.1729$ | $u^*(k)_{02}(0.85) = -0.1600$ |
| $J_{02}^*(0.87) = 0.1809$ | $u^*(k)_{02}(0.87) = -0.1800$ |
| $J_{02}^*(0.89) = 0.1893$ | $u^*(k)_{02}(0.89) = -0.1800$ |
| $J_{02}^*(0.91) = 0.1979$ | $u^*(k)_{02}(0.91) = -0.1800$ |
| $J_{02}^*(0.93) = 0.2068$ | $u^*(k)_{02}(0.93) = -0.1800$ |
| $J_{02}^*(0.95) = 0.2160$ | $u^*(k)_{02}(0.95) = -0.1800$ |
| $J_{02}^*(0.97) = 0.2250$ | $u^*(k)_{02}(0.97) = -0.2000$ |
| $J_{02}^*(0.99) = 0.2343$ | $u^*(k)_{02}(0.99) = -0.2000$ |
| $J_{02}^*(1.01) = 0.2439$ | $u^*(k)_{02}(1.01) = -0.2000$ |
| $J_{02}^*(1.03) = 0.2537$ | $u^*(k)_{02}(1.03) = -0.2000$ |
| $J_{02}^*(1.05) = 0.2639$ | $u^*(k)_{02}(1.05) = -0.2000$ |
| $J_{02}^*(1.07) = 0.2739$ | $u^*(k)_{02}(1.07) = -0.2200$ |
| $J_{02}^*(1.09) = 0.2841$ | $u^*(k)_{02}(1.09) = -0.2200$ |
| $J_{02}^*(1.11) = 0.2946$ | $u^*(k)_{02}(1.11) = -0.2200$ |
| $J_{02}^*(1.13) = 0.3055$ | $u^*(k)_{02}(1.13) = -0.2200$ |
| $J_{02}^*(1.10) = 0.2904$ | $u^*(k)_{02}(1.10) = -0.2200$ |
| $J_{02}^*(1.12) = 0.3011$ | $u^*(k)_{02}(1.12) = -0.2200$ |
| $J_{02}^*(1.14) = 0.3121$ | $u^*(k)_{02}(1.14) = -0.2200$ |
| $J_{02}^*(1.11) = 0.2968$ | $u^*(k)_{02}(1.11) = -0.2200$ |
| $J_{02}^*(1.13) = 0.3077$ | $u^*(k)_{02}(1.13) = -0.2200$ |
| $J_{02}^*(1.15) = 0.3188$ | $u^*(k)_{02}(1.15) = -0.2400$ |
| $J_{02}^*(1.12) = 0.3033$ | $u^*(k)_{02}(1.12) = -0.2200$ |
| $J_{02}^*(1.14) = 0.3143$ | $u^*(k)_{02}(1.14) = -0.2200$ |
| $J_{02}^*(1.16) = 0.3253$ | $u^*(k)_{02}(1.16) = -0.2400$ |
| $J_{02}^*(1.14) = 0.3099$ | $u^*(k)_{02}(1.14) = -0.2200$ |
| $J_{02}^*(1.16) = 0.3210$ | $u^*(k)_{02}(1.16) = -0.2400$ |
| $J_{02}^*(1.18) = 0.3320$ | $u^*(k)_{02}(1.18) = -0.2400$ |
| $J_{02}^*(1.15) = 0.3166$ | $u^*(k)_{02}(1.15) = -0.2200$ |
| $J_{02}^*(1.17) = 0.3275$ | $u^*(k)_{02}(1.17) = -0.2400$ |
| $J_{02}^*(1.19) = 0.3387$ | $u^*(k)_{02}(1.19) = -0.2400$ |
| $J_{02}^*(1.16) = 0.3231$ | $u^*(k)_{02}(1.16) = -0.2400$ |
| $J_{02}^*(1.18) = 0.3342$ | $u^*(k)_{02}(1.18) = -0.2400$ |
| $J_{02}^*(1.20) = 0.3456$ | $u^*(k)_{02}(1.20) = -0.2400$ |
| $J_{02}^*(1.17) = 0.3298$ | $u^*(k)_{02}(1.17) = -0.2400$ |
| $J_{02}^*(1.19) = 0.3410$ | $u^*(k)_{02}(1.19) = -0.2400$ |
| $J_{02}^*(1.21) = 0.3526$ | $u^*(k)_{02}(1.21) = -0.2400$ |
| $J_{02}^*(1.18) = 0.3365$ | $u^*(k)_{02}(1.18) = -0.2400$ |
| $J_{02}^*(1.20) = 0.3479$ | $u^*(k)_{02}(1.20) = -0.2400$ |
| $J_{02}^*(1.22) = 0.3596$ | $u^*(k)_{02}(1.22) = -0.2400$ |
| $J_{02}^*(1.20) = 0.3433$ | $u^*(k)_{02}(1.20) = -0.2400$ |



|                           |                               |
|---------------------------|-------------------------------|
| $J_{02}^*(1.22) = 0.3549$ | $u^*(k)_{02}(1.22) = -0.2400$ |
| $J_{02}^*(1.24) = 0.3668$ | $u^*(k)_{02}(1.24) = -0.2400$ |
| $J_{02}^*(1.21) = 0.3502$ | $u^*(k)_{02}(1.21) = -0.2400$ |
| $J_{02}^*(1.23) = 0.3620$ | $u^*(k)_{02}(1.23) = -0.2400$ |
| $J_{02}^*(1.25) = 0.3741$ | $u^*(k)_{02}(1.25) = -0.2400$ |
| $J_{02}^*(1.22) = 0.3573$ | $u^*(k)_{02}(1.22) = -0.2400$ |
| $J_{02}^*(1.24) = 0.3692$ | $u^*(k)_{02}(1.24) = -0.2400$ |
| $J_{02}^*(1.26) = 0.3812$ | $u^*(k)_{02}(1.26) = -0.2600$ |
| $J_{02}^*(1.23) = 0.3644$ | $u^*(k)_{02}(1.23) = -0.2400$ |
| $J_{02}^*(1.25) = 0.3765$ | $u^*(k)_{02}(1.25) = -0.2600$ |
| $J_{02}^*(1.27) = 0.3884$ | $u^*(k)_{02}(1.27) = -0.2600$ |
| $J_{02}^*(1.24) = 0.3716$ | $u^*(k)_{02}(1.24) = -0.2400$ |
| $J_{02}^*(1.26) = 0.3836$ | $u^*(k)_{02}(1.26) = -0.2600$ |
| $J_{02}^*(1.28) = 0.3957$ | $u^*(k)_{02}(1.28) = -0.2600$ |
| $J_{02}^*(1.26) = 0.3788$ | $u^*(k)_{02}(1.26) = -0.2600$ |
| $J_{02}^*(1.28) = 0.3908$ | $u^*(k)_{02}(1.28) = -0.2600$ |
| $J_{02}^*(1.30) = 0.4031$ | $u^*(k)_{02}(1.30) = -0.2600$ |
| $J_{02}^*(1.27) = 0.3860$ | $u^*(k)_{02}(1.27) = -0.2600$ |
| $J_{02}^*(1.29) = 0.3982$ | $u^*(k)_{02}(1.29) = -0.2600$ |
| $J_{02}^*(1.31) = 0.4106$ | $u^*(k)_{02}(1.31) = -0.2600$ |
| $J_{02}^*(1.28) = 0.3933$ | $u^*(k)_{02}(1.28) = -0.2600$ |
| $J_{02}^*(1.30) = 0.4056$ | $u^*(k)_{02}(1.30) = -0.2600$ |
| $J_{02}^*(1.32) = 0.4182$ | $u^*(k)_{02}(1.32) = -0.2600$ |
| $J_{02}^*(1.29) = 0.4006$ | $u^*(k)_{02}(1.29) = -0.2600$ |
| $J_{02}^*(1.31) = 0.4131$ | $u^*(k)_{02}(1.31) = -0.2600$ |
| $J_{02}^*(1.33) = 0.4259$ | $u^*(k)_{02}(1.33) = -0.2600$ |
| $J_{02}^*(1.30) = 0.4081$ | $u^*(k)_{02}(1.30) = -0.2600$ |
| $J_{02}^*(1.32) = 0.4208$ | $u^*(k)_{02}(1.32) = -0.2600$ |
| $J_{02}^*(1.34) = 0.4338$ | $u^*(k)_{02}(1.34) = -0.2600$ |
| $J_{02}^*(1.32) = 0.4157$ | $u^*(k)_{02}(1.32) = -0.2600$ |
| $J_{02}^*(1.34) = 0.4285$ | $u^*(k)_{02}(1.34) = -0.2600$ |
| $J_{02}^*(1.36) = 0.4415$ | $u^*(k)_{02}(1.36) = -0.2800$ |
| $J_{02}^*(1.33) = 0.4234$ | $u^*(k)_{02}(1.33) = -0.2600$ |
| $J_{02}^*(1.35) = 0.4364$ | $u^*(k)_{02}(1.35) = -0.2600$ |
| $J_{02}^*(1.37) = 0.4493$ | $u^*(k)_{02}(1.37) = -0.2800$ |
| $J_{02}^*(1.34) = 0.4311$ | $u^*(k)_{02}(1.34) = -0.2600$ |
| $J_{02}^*(1.36) = 0.4441$ | $u^*(k)_{02}(1.36) = -0.2800$ |
| $J_{02}^*(1.38) = 0.4571$ | $u^*(k)_{02}(1.38) = -0.2800$ |
| $J_{02}^*(1.35) = 0.4390$ | $u^*(k)_{02}(1.35) = -0.2800$ |
| $J_{02}^*(1.37) = 0.4519$ | $u^*(k)_{02}(1.37) = -0.2800$ |
| $J_{02}^*(1.39) = 0.4650$ | $u^*(k)_{02}(1.39) = -0.2800$ |
| $J_{02}^*(1.36) = 0.4467$ | $u^*(k)_{02}(1.36) = -0.2800$ |
| $J_{02}^*(1.38) = 0.4597$ | $u^*(k)_{02}(1.38) = -0.2800$ |
| $J_{02}^*(1.40) = 0.4731$ | $u^*(k)_{02}(1.40) = -0.2800$ |
| $J_{02}^*(1.38) = 0.4545$ | $u^*(k)_{02}(1.38) = -0.2800$ |
| $J_{02}^*(1.40) = 0.4677$ | $u^*(k)_{02}(1.40) = -0.2800$ |
| $J_{02}^*(1.42) = 0.4812$ | $u^*(k)_{02}(1.42) = -0.2800$ |
| $J_{02}^*(1.39) = 0.4624$ | $u^*(k)_{02}(1.39) = -0.2800$ |
| $J_{02}^*(1.41) = 0.4758$ | $u^*(k)_{02}(1.41) = -0.2800$ |
| $J_{02}^*(1.43) = 0.4895$ | $u^*(k)_{02}(1.43) = -0.2800$ |
| $J_{02}^*(1.40) = 0.4704$ | $u^*(k)_{02}(1.40) = -0.2800$ |
| $J_{02}^*(1.42) = 0.4840$ | $u^*(k)_{02}(1.42) = -0.2800$ |
| $J_{02}^*(1.44) = 0.4979$ | $u^*(k)_{02}(1.44) = -0.2800$ |
| $J_{02}^*(1.41) = 0.4785$ | $u^*(k)_{02}(1.41) = -0.2800$ |

|                           |                               |
|---------------------------|-------------------------------|
| $J_{02}^*(1.43) = 0.4923$ | $u^*(k)_{02}(1.43) = -0.2800$ |
| $J_{02}^*(1.45) = 0.5063$ | $u^*(k)_{02}(1.45) = -0.3000$ |
| $J_{02}^*(1.42) = 0.4867$ | $u^*(k)_{02}(1.42) = -0.2800$ |
| $J_{02}^*(1.44) = 0.5007$ | $u^*(k)_{02}(1.44) = -0.2800$ |
| $J_{02}^*(1.46) = 0.5145$ | $u^*(k)_{02}(1.46) = -0.3000$ |
| $J_{02}^*(1.44) = 0.4951$ | $u^*(k)_{02}(1.44) = -0.2800$ |
| $J_{02}^*(1.46) = 0.5090$ | $u^*(k)_{02}(1.46) = -0.3000$ |
| $J_{02}^*(1.48) = 0.5229$ | $u^*(k)_{02}(1.48) = -0.3000$ |
| $J_{02}^*(1.45) = 0.5035$ | $u^*(k)_{02}(1.45) = -0.2800$ |
| $J_{02}^*(1.47) = 0.5173$ | $u^*(k)_{02}(1.47) = -0.3000$ |
| $J_{02}^*(1.49) = 0.5314$ | $u^*(k)_{02}(1.49) = -0.3000$ |
| $J_{02}^*(1.46) = 0.5118$ | $u^*(k)_{02}(1.46) = -0.3000$ |
| $J_{02}^*(1.48) = 0.5257$ | $u^*(k)_{02}(1.48) = -0.3000$ |
| $J_{02}^*(1.50) = 0.5400$ | $u^*(k)_{02}(1.50) = -0.3000$ |
| $J_{02}^*(1.47) = 0.5201$ | $u^*(k)_{02}(1.47) = -0.3000$ |
| $J_{02}^*(1.49) = 0.5343$ | $u^*(k)_{02}(1.49) = -0.3000$ |
| $J_{02}^*(1.48) = 0.5286$ | $u^*(k)_{02}(1.48) = -0.3000$ |
| $J_{02}^*(1.50) = 0.5371$ | $u^*(k)_{02}(1.50) = -0.3000$ |
| $J_{12}^*(0.00) = 0.0000$ | $u^*(k)_{13}(0.00) = 0.0000$  |
| $J_{12}^*(0.02) = 0.0001$ | $u^*(k)_{13}(0.02) = 0.0000$  |
| $J_{12}^*(0.04) = 0.0002$ | $u^*(k)_{13}(0.04) = 0.0000$  |
| $J_{12}^*(0.06) = 0.0005$ | $u^*(k)_{13}(0.06) = 0.0000$  |
| $J_{12}^*(0.08) = 0.0008$ | $u^*(k)_{13}(0.08) = 0.0000$  |
| $J_{12}^*(0.10) = 0.0011$ | $u^*(k)_{13}(0.10) = 0.0000$  |
| $J_{12}^*(0.12) = 0.0013$ | $u^*(k)_{13}(0.12) = 0.0000$  |
| $J_{12}^*(0.14) = 0.0017$ | $u^*(k)_{13}(0.14) = 0.0000$  |
| $J_{12}^*(0.16) = 0.0022$ | $u^*(k)_{13}(0.16) = 0.0000$  |
| $J_{12}^*(0.18) = 0.0027$ | $u^*(k)_{13}(0.18) = -0.0200$ |
| $J_{12}^*(0.20) = 0.0032$ | $u^*(k)_{13}(0.20) = -0.0200$ |
| $J_{12}^*(0.22) = 0.0038$ | $u^*(k)_{13}(0.22) = -0.0200$ |
| $J_{12}^*(0.24) = 0.0046$ | $u^*(k)_{13}(0.24) = -0.0200$ |
| $J_{12}^*(0.26) = 0.0054$ | $u^*(k)_{13}(0.26) = -0.0200$ |
| $J_{12}^*(0.28) = 0.0063$ | $u^*(k)_{13}(0.28) = -0.0200$ |
| $J_{12}^*(0.30) = 0.0071$ | $u^*(k)_{13}(0.30) = -0.0200$ |
| $J_{12}^*(0.32) = 0.0080$ | $u^*(k)_{13}(0.32) = -0.0200$ |
| $J_{12}^*(0.34) = 0.0090$ | $u^*(k)_{13}(0.34) = -0.0200$ |
| $J_{12}^*(0.36) = 0.0100$ | $u^*(k)_{13}(0.36) = -0.0200$ |
| $J_{12}^*(0.38) = 0.0112$ | $u^*(k)_{13}(0.38) = -0.0200$ |
| $J_{12}^*(0.40) = 0.0125$ | $u^*(k)_{13}(0.40) = -0.0200$ |
| $J_{12}^*(0.42) = 0.0138$ | $u^*(k)_{13}(0.42) = -0.0200$ |
| $J_{12}^*(0.44) = 0.0153$ | $u^*(k)_{13}(0.44) = -0.0400$ |
| $J_{12}^*(0.46) = 0.0167$ | $u^*(k)_{13}(0.46) = -0.0400$ |
| $J_{12}^*(0.48) = 0.0182$ | $u^*(k)_{13}(0.48) = -0.0200$ |
| $J_{12}^*(0.50) = 0.0196$ | $u^*(k)_{13}(0.50) = -0.0400$ |
| $J_{12}^*(0.52) = 0.0211$ | $u^*(k)_{13}(0.52) = -0.0400$ |
| $J_{12}^*(0.54) = 0.0226$ | $u^*(k)_{13}(0.54) = -0.0400$ |
| $J_{12}^*(0.56) = 0.0242$ | $u^*(k)_{13}(0.56) = -0.0400$ |
| $J_{12}^*(0.58) = 0.0260$ | $u^*(k)_{13}(0.58) = -0.0400$ |
| $J_{12}^*(0.60) = 0.0278$ | $u^*(k)_{13}(0.60) = -0.0400$ |
| $J_{12}^*(0.62) = 0.0298$ | $u^*(k)_{13}(0.62) = -0.0400$ |
| $J_{12}^*(0.64) = 0.0318$ | $u^*(k)_{13}(0.64) = -0.0400$ |
| $J_{12}^*(0.66) = 0.0338$ | $u^*(k)_{13}(0.66) = -0.0400$ |
| $J_{12}^*(0.68) = 0.0358$ | $u^*(k)_{13}(0.68) = -0.0400$ |
| $J_{12}^*(0.70) = 0.0379$ | $u^*(k)_{13}(0.70) = -0.0400$ |

|                           |                               |
|---------------------------|-------------------------------|
| $J_{12}^*(0.72) = 0.0401$ | $u^*(k)_{13}(0.72) = -0.0400$ |
| $J_{12}^*(0.74) = 0.0424$ | $u^*(k)_{13}(0.74) = -0.0400$ |
| $J_{12}^*(0.76) = 0.0448$ | $u^*(k)_{13}(0.76) = -0.0400$ |
| $J_{12}^*(0.78) = 0.0472$ | $u^*(k)_{13}(0.78) = -0.0600$ |
| $J_{12}^*(0.80) = 0.0496$ | $u^*(k)_{13}(0.80) = -0.0600$ |
| $J_{12}^*(0.82) = 0.0521$ | $u^*(k)_{13}(0.82) = -0.0600$ |
| $J_{12}^*(0.84) = 0.0547$ | $u^*(k)_{13}(0.84) = -0.0600$ |
| $J_{12}^*(0.86) = 0.0573$ | $u^*(k)_{13}(0.86) = -0.0600$ |
| $J_{12}^*(0.88) = 0.0599$ | $u^*(k)_{13}(0.88) = -0.0600$ |
| $J_{12}^*(0.90) = 0.0625$ | $u^*(k)_{13}(0.90) = -0.0600$ |
| $J_{12}^*(0.92) = 0.0653$ | $u^*(k)_{13}(0.92) = -0.0600$ |
| $J_{12}^*(0.94) = 0.0682$ | $u^*(k)_{13}(0.94) = -0.0600$ |
| $J_{12}^*(0.96) = 0.0711$ | $u^*(k)_{13}(0.96) = -0.0600$ |
| $J_{12}^*(0.98) = 0.0742$ | $u^*(k)_{13}(0.98) = -0.0600$ |
| $J_{12}^*(1.00) = 0.0774$ | $u^*(k)_{13}(1.00) = -0.0600$ |
| $J_{12}^*(1.02) = 0.0806$ | $u^*(k)_{13}(1.02) = -0.0600$ |
| $J_{12}^*(1.04) = 0.0837$ | $u^*(k)_{13}(1.04) = -0.0600$ |
| $J_{12}^*(1.06) = 0.0869$ | $u^*(k)_{13}(1.06) = -0.0600$ |
| $J_{12}^*(1.08) = 0.0902$ | $u^*(k)_{13}(1.08) = -0.0600$ |
| $J_{12}^*(1.10) = 0.0936$ | $u^*(k)_{13}(1.10) = -0.0800$ |
| $J_{12}^*(1.12) = 0.0969$ | $u^*(k)_{13}(1.12) = -0.0800$ |
| $J_{12}^*(1.14) = 0.1004$ | $u^*(k)_{13}(1.14) = -0.0800$ |
| $J_{12}^*(1.16) = 0.1039$ | $u^*(k)_{13}(1.16) = -0.0800$ |
| $J_{12}^*(1.18) = 0.1075$ | $u^*(k)_{13}(1.18) = -0.0800$ |
| $J_{12}^*(1.20) = 0.1113$ | $u^*(k)_{13}(1.20) = -0.0800$ |
| $J_{12}^*(1.22) = 0.1151$ | $u^*(k)_{13}(1.22) = -0.0800$ |
| $J_{12}^*(1.24) = 0.1188$ | $u^*(k)_{13}(1.24) = -0.0800$ |
| $J_{12}^*(1.26) = 0.1225$ | $u^*(k)_{13}(1.26) = -0.0800$ |
| $J_{12}^*(1.28) = 0.1264$ | $u^*(k)_{13}(1.28) = -0.0800$ |
| $J_{12}^*(1.30) = 0.1304$ | $u^*(k)_{13}(1.30) = -0.0800$ |
| $J_{12}^*(1.32) = 0.1345$ | $u^*(k)_{13}(1.32) = -0.0800$ |
| $J_{12}^*(1.34) = 0.1387$ | $u^*(k)_{13}(1.34) = -0.0800$ |
| $J_{12}^*(1.36) = 0.1430$ | $u^*(k)_{13}(1.36) = -0.0800$ |
| $J_{12}^*(1.38) = 0.1473$ | $u^*(k)_{13}(1.38) = -0.1000$ |
| $J_{12}^*(1.40) = 0.1516$ | $u^*(k)_{13}(1.40) = -0.0800$ |
| $J_{12}^*(1.42) = 0.1559$ | $u^*(k)_{13}(1.42) = -0.0800$ |
| $J_{12}^*(1.44) = 0.1602$ | $u^*(k)_{13}(1.44) = -0.1000$ |
| $J_{12}^*(1.46) = 0.1646$ | $u^*(k)_{13}(1.46) = -0.1000$ |
| $J_{12}^*(1.48) = 0.1690$ | $u^*(k)_{13}(1.48) = -0.1000$ |
| $J_{12}^*(1.50) = 0.1736$ | $u^*(k)_{13}(1.50) = -0.1000$ |

### 3-16 Part (c)

|                           |                               |
|---------------------------|-------------------------------|
| $J_{02}^*(0.00) = 0.0000$ | $u^*(k)_{02}(0.00) = 0.0000$  |
| $J_{02}^*(0.02) = 0.0001$ | $u^*(k)_{02}(0.02) = 0.0000$  |
| $J_{02}^*(0.04) = 0.0006$ | $u^*(k)_{02}(0.04) = 0.0000$  |
| $J_{02}^*(0.06) = 0.0011$ | $u^*(k)_{02}(0.06) = -0.0200$ |
| $J_{02}^*(0.08) = 0.0016$ | $u^*(k)_{02}(0.08) = -0.0200$ |
| $J_{02}^*(0.10) = 0.0024$ | $u^*(k)_{02}(0.10) = -0.0200$ |
| $J_{02}^*(0.12) = 0.0035$ | $u^*(k)_{02}(0.12) = -0.0200$ |
| $J_{02}^*(0.14) = 0.0049$ | $u^*(k)_{02}(0.14) = -0.0200$ |
| $J_{02}^*(0.16) = 0.0063$ | $u^*(k)_{02}(0.16) = -0.0400$ |
| $J_{02}^*(0.18) = 0.0078$ | $u^*(k)_{02}(0.18) = -0.0400$ |
| $J_{02}^*(0.20) = 0.0096$ | $u^*(k)_{02}(0.20) = -0.0400$ |

|                           |                               |
|---------------------------|-------------------------------|
| $J_{02}^*(0.22) = 0.0117$ | $u^*(k)_{02}(0.22) = -0.0400$ |
| $J_{02}^*(0.24) = 0.0140$ | $u^*(k)_{02}(0.24) = -0.0400$ |
| $J_{02}^*(0.26) = 0.0164$ | $u^*(k)_{02}(0.26) = -0.0600$ |
| $J_{02}^*(0.28) = 0.0189$ | $u^*(k)_{02}(0.28) = -0.0600$ |
| $J_{02}^*(0.30) = 0.0216$ | $u^*(k)_{02}(0.30) = -0.0600$ |
| $J_{02}^*(0.32) = 0.0246$ | $u^*(k)_{02}(0.32) = -0.0600$ |
| $J_{02}^*(0.34) = 0.0279$ | $u^*(k)_{02}(0.34) = -0.0600$ |
| $J_{02}^*(0.36) = 0.0313$ | $u^*(k)_{02}(0.36) = -0.0800$ |
| $J_{02}^*(0.38) = 0.0347$ | $u^*(k)_{02}(0.38) = -0.0800$ |
| $J_{02}^*(0.40) = 0.0384$ | $u^*(k)_{02}(0.40) = -0.0800$ |
| $J_{02}^*(0.42) = 0.0424$ | $u^*(k)_{02}(0.42) = -0.0800$ |
| $J_{02}^*(0.44) = 0.0467$ | $u^*(k)_{02}(0.44) = -0.0800$ |
| $J_{02}^*(0.46) = 0.0510$ | $u^*(k)_{02}(0.46) = -0.1000$ |
| $J_{02}^*(0.48) = 0.0553$ | $u^*(k)_{02}(0.48) = -0.1000$ |
| $J_{02}^*(0.50) = 0.0600$ | $u^*(k)_{02}(0.50) = -0.1000$ |
| $J_{02}^*(0.52) = 0.0649$ | $u^*(k)_{02}(0.52) = -0.1000$ |
| $J_{02}^*(0.54) = 0.0702$ | $u^*(k)_{02}(0.54) = -0.1000$ |
| $J_{02}^*(0.56) = 0.0755$ | $u^*(k)_{02}(0.56) = -0.1200$ |
| $J_{02}^*(0.58) = 0.0808$ | $u^*(k)_{02}(0.58) = -0.1200$ |
| $J_{02}^*(0.60) = 0.0864$ | $u^*(k)_{02}(0.60) = -0.1200$ |
| $J_{02}^*(0.62) = 0.0923$ | $u^*(k)_{02}(0.62) = -0.1200$ |
| $J_{02}^*(0.64) = 0.0985$ | $u^*(k)_{02}(0.64) = -0.1200$ |
| $J_{02}^*(0.66) = 0.1047$ | $u^*(k)_{02}(0.66) = -0.1400$ |
| $J_{02}^*(0.68) = 0.1110$ | $u^*(k)_{02}(0.68) = -0.1400$ |
| $J_{02}^*(0.70) = 0.1176$ | $u^*(k)_{02}(0.70) = -0.1400$ |
| $J_{02}^*(0.72) = 0.1245$ | $u^*(k)_{02}(0.72) = -0.1400$ |
| $J_{02}^*(0.74) = 0.1316$ | $u^*(k)_{02}(0.74) = -0.1400$ |
| $J_{02}^*(0.76) = 0.1388$ | $u^*(k)_{02}(0.76) = -0.1600$ |
| $J_{02}^*(0.78) = 0.1461$ | $u^*(k)_{02}(0.78) = -0.1600$ |
| $J_{02}^*(0.80) = 0.1536$ | $u^*(k)_{02}(0.80) = -0.1600$ |
| $J_{02}^*(0.82) = 0.1614$ | $u^*(k)_{02}(0.82) = -0.1600$ |
| $J_{02}^*(0.84) = 0.1695$ | $u^*(k)_{02}(0.84) = -0.1600$ |
| $J_{02}^*(0.86) = 0.1777$ | $u^*(k)_{02}(0.86) = -0.1800$ |
| $J_{02}^*(0.88) = 0.1859$ | $u^*(k)_{02}(0.88) = -0.1800$ |
| $J_{02}^*(0.90) = 0.1944$ | $u^*(k)_{02}(0.90) = -0.1800$ |
| $J_{02}^*(0.92) = 0.2032$ | $u^*(k)_{02}(0.92) = -0.1800$ |
| $J_{02}^*(0.94) = 0.2123$ | $u^*(k)_{02}(0.94) = -0.1800$ |
| $J_{02}^*(0.96) = 0.2214$ | $u^*(k)_{02}(0.96) = -0.2000$ |
| $J_{02}^*(0.98) = 0.2305$ | $u^*(k)_{02}(0.98) = -0.2000$ |
| $J_{02}^*(1.00) = 0.2400$ | $u^*(k)_{02}(1.00) = -0.2000$ |
| $J_{02}^*(1.02) = 0.2497$ | $u^*(k)_{02}(1.02) = -0.2000$ |
| $J_{02}^*(1.04) = 0.2598$ | $u^*(k)_{02}(1.04) = -0.2000$ |
| $J_{02}^*(1.06) = 0.2699$ | $u^*(k)_{02}(1.06) = -0.2200$ |
| $J_{02}^*(1.08) = 0.2800$ | $u^*(k)_{02}(1.08) = -0.2200$ |
| $J_{02}^*(0.01) = 0.0001$ | $u^*(k)_{02}(0.01) = 0.0000$  |
| $J_{02}^*(0.03) = 0.0004$ | $u^*(k)_{02}(0.03) = 0.0000$  |
| $J_{02}^*(0.05) = 0.0009$ | $u^*(k)_{02}(0.05) = -0.0200$ |
| $J_{02}^*(0.07) = 0.0013$ | $u^*(k)_{02}(0.07) = -0.0200$ |
| $J_{02}^*(0.09) = 0.0020$ | $u^*(k)_{02}(0.09) = -0.0200$ |
| $J_{02}^*(0.11) = 0.0030$ | $u^*(k)_{02}(0.11) = -0.0200$ |
| $J_{02}^*(0.13) = 0.0043$ | $u^*(k)_{02}(0.13) = -0.0200$ |
| $J_{02}^*(0.15) = 0.0058$ | $u^*(k)_{02}(0.15) = -0.0400$ |
| $J_{02}^*(0.17) = 0.0072$ | $u^*(k)_{02}(0.17) = -0.0400$ |
| $J_{02}^*(0.19) = 0.0089$ | $u^*(k)_{02}(0.19) = -0.0400$ |

|                           |                               |
|---------------------------|-------------------------------|
| $J_{02}^*(0.21) = 0.0108$ | $u^*(k)_{02}(0.21) = -0.0400$ |
| $J_{02}^*(0.23) = 0.0130$ | $u^*(k)_{02}(0.23) = -0.0400$ |
| $J_{02}^*(0.25) = 0.0155$ | $u^*(k)_{02}(0.25) = -0.0600$ |
| $J_{02}^*(0.27) = 0.0179$ | $u^*(k)_{02}(0.27) = -0.0600$ |
| $J_{02}^*(0.29) = 0.0205$ | $u^*(k)_{02}(0.29) = -0.0600$ |
| $J_{02}^*(0.31) = 0.0234$ | $u^*(k)_{02}(0.31) = -0.0600$ |
| $J_{02}^*(0.33) = 0.0266$ | $u^*(k)_{02}(0.33) = -0.0600$ |
| $J_{02}^*(0.35) = 0.0300$ | $u^*(k)_{02}(0.35) = -0.0800$ |
| $J_{02}^*(0.37) = 0.0333$ | $u^*(k)_{02}(0.37) = -0.0800$ |
| $J_{02}^*(0.39) = 0.0369$ | $u^*(k)_{02}(0.39) = -0.0800$ |
| $J_{02}^*(0.41) = 0.0408$ | $u^*(k)_{02}(0.41) = -0.0800$ |
| $J_{02}^*(0.43) = 0.0449$ | $u^*(k)_{02}(0.43) = -0.0800$ |
| $J_{02}^*(0.45) = 0.0493$ | $u^*(k)_{02}(0.45) = -0.1000$ |
| $J_{02}^*(0.47) = 0.0536$ | $u^*(k)_{02}(0.47) = -0.1000$ |
| $J_{02}^*(0.49) = 0.0581$ | $u^*(k)_{02}(0.49) = -0.1000$ |
| $J_{02}^*(0.51) = 0.0629$ | $u^*(k)_{02}(0.51) = -0.1000$ |
| $J_{02}^*(0.53) = 0.0680$ | $u^*(k)_{02}(0.53) = -0.1000$ |
| $J_{02}^*(0.55) = 0.0734$ | $u^*(k)_{02}(0.55) = -0.1200$ |
| $J_{02}^*(0.57) = 0.0786$ | $u^*(k)_{02}(0.57) = -0.1200$ |
| $J_{02}^*(0.59) = 0.0841$ | $u^*(k)_{02}(0.59) = -0.1200$ |
| $J_{02}^*(0.61) = 0.0899$ | $u^*(k)_{02}(0.61) = -0.1200$ |
| $J_{02}^*(0.63) = 0.0960$ | $u^*(k)_{02}(0.63) = -0.1200$ |
| $J_{02}^*(0.65) = 0.1023$ | $u^*(k)_{02}(0.65) = -0.1400$ |
| $J_{02}^*(0.67) = 0.1085$ | $u^*(k)_{02}(0.67) = -0.1400$ |
| $J_{02}^*(0.69) = 0.1149$ | $u^*(k)_{02}(0.69) = -0.1400$ |
| $J_{02}^*(0.71) = 0.1217$ | $u^*(k)_{02}(0.71) = -0.1400$ |
| $J_{02}^*(0.73) = 0.1287$ | $u^*(k)_{02}(0.73) = -0.1400$ |
| $J_{02}^*(0.75) = 0.1360$ | $u^*(k)_{02}(0.75) = -0.1600$ |
| $J_{02}^*(0.77) = 0.1431$ | $u^*(k)_{02}(0.77) = -0.1600$ |
| $J_{02}^*(0.79) = 0.1506$ | $u^*(k)_{02}(0.79) = -0.1600$ |
| $J_{02}^*(0.81) = 0.1583$ | $u^*(k)_{02}(0.81) = -0.1600$ |
| $J_{02}^*(0.83) = 0.1663$ | $u^*(k)_{02}(0.83) = -0.1600$ |
| $J_{02}^*(0.85) = 0.1745$ | $u^*(k)_{02}(0.85) = -0.1800$ |
| $J_{02}^*(0.87) = 0.1826$ | $u^*(k)_{02}(0.87) = -0.1800$ |
| $J_{02}^*(0.89) = 0.1910$ | $u^*(k)_{02}(0.89) = -0.1800$ |
| $J_{02}^*(0.91) = 0.1996$ | $u^*(k)_{02}(0.91) = -0.1800$ |
| $J_{02}^*(0.93) = 0.2086$ | $u^*(k)_{02}(0.93) = -0.1800$ |
| $J_{02}^*(0.95) = 0.2178$ | $u^*(k)_{02}(0.95) = -0.2000$ |
| $J_{02}^*(0.97) = 0.2268$ | $u^*(k)_{02}(0.97) = -0.2000$ |
| $J_{02}^*(0.99) = 0.2362$ | $u^*(k)_{02}(0.99) = -0.2000$ |
| $J_{02}^*(1.01) = 0.2458$ | $u^*(k)_{02}(1.01) = -0.2000$ |
| $J_{02}^*(1.03) = 0.2557$ | $u^*(k)_{02}(1.03) = -0.2000$ |
| $J_{02}^*(1.05) = 0.2659$ | $u^*(k)_{02}(1.05) = -0.2200$ |
| $J_{02}^*(1.07) = 0.2759$ | $u^*(k)_{02}(1.07) = -0.2200$ |
| $J_{02}^*(1.09) = 0.2862$ | $u^*(k)_{02}(1.09) = -0.2200$ |
| $J_{02}^*(0.00) = 0.0000$ | $u^*(k)_{02}(0.00) = 0.0000$  |
| $J_{02}^*(0.02) = 0.0002$ | $u^*(k)_{02}(0.02) = 0.0000$  |
| $J_{02}^*(0.04) = 0.0007$ | $u^*(k)_{02}(0.04) = 0.0000$  |
| $J_{02}^*(0.06) = 0.0011$ | $u^*(k)_{02}(0.06) = -0.0200$ |
| $J_{02}^*(0.08) = 0.0017$ | $u^*(k)_{02}(0.08) = -0.0200$ |
| $J_{02}^*(0.10) = 0.0026$ | $u^*(k)_{02}(0.10) = -0.0200$ |
| $J_{02}^*(0.12) = 0.0038$ | $u^*(k)_{02}(0.12) = -0.0200$ |
| $J_{02}^*(0.14) = 0.0052$ | $u^*(k)_{02}(0.14) = -0.0200$ |
| $J_{02}^*(0.16) = 0.0066$ | $u^*(k)_{02}(0.16) = -0.0400$ |

|                           |                               |
|---------------------------|-------------------------------|
| $J_{02}^*(0.18) = 0.0082$ | $u^*(k)_{02}(0.18) = -0.0400$ |
| $J_{02}^*(0.20) = 0.0100$ | $u^*(k)_{02}(0.20) = -0.0400$ |
| $J_{02}^*(0.22) = 0.0121$ | $u^*(k)_{02}(0.22) = -0.0400$ |
| $J_{02}^*(0.24) = 0.0145$ | $u^*(k)_{02}(0.24) = -0.0400$ |
| $J_{02}^*(0.26) = 0.0169$ | $u^*(k)_{02}(0.26) = -0.0600$ |
| $J_{02}^*(0.28) = 0.0194$ | $u^*(k)_{02}(0.28) = -0.0600$ |
| $J_{02}^*(0.30) = 0.0222$ | $u^*(k)_{02}(0.30) = -0.0600$ |
| $J_{02}^*(0.32) = 0.0253$ | $u^*(k)_{02}(0.32) = -0.0600$ |
| $J_{02}^*(0.34) = 0.0286$ | $u^*(k)_{02}(0.34) = -0.0600$ |
| $J_{02}^*(0.36) = 0.0320$ | $u^*(k)_{02}(0.36) = -0.0800$ |
| $J_{02}^*(0.38) = 0.0354$ | $u^*(k)_{02}(0.38) = -0.0800$ |
| $J_{02}^*(0.40) = 0.0392$ | $u^*(k)_{02}(0.40) = -0.0800$ |
| $J_{02}^*(0.42) = 0.0432$ | $u^*(k)_{02}(0.42) = -0.0800$ |
| $J_{02}^*(0.44) = 0.0475$ | $u^*(k)_{02}(0.44) = -0.0800$ |
| $J_{02}^*(0.46) = 0.0518$ | $u^*(k)_{02}(0.46) = -0.1000$ |
| $J_{02}^*(0.48) = 0.0563$ | $u^*(k)_{02}(0.48) = -0.1000$ |
| $J_{02}^*(0.50) = 0.0610$ | $u^*(k)_{02}(0.50) = -0.1000$ |
| $J_{02}^*(0.52) = 0.0660$ | $u^*(k)_{02}(0.52) = -0.1000$ |
| $J_{02}^*(0.54) = 0.0713$ | $u^*(k)_{02}(0.54) = -0.1000$ |
| $J_{02}^*(0.56) = 0.0765$ | $u^*(k)_{02}(0.56) = -0.1200$ |
| $J_{02}^*(0.58) = 0.0819$ | $u^*(k)_{02}(0.58) = -0.1200$ |
| $J_{02}^*(0.60) = 0.0876$ | $u^*(k)_{02}(0.60) = -0.1200$ |
| $J_{02}^*(0.62) = 0.0935$ | $u^*(k)_{02}(0.62) = -0.1200$ |
| $J_{02}^*(0.64) = 0.0998$ | $u^*(k)_{02}(0.64) = -0.1200$ |
| $J_{02}^*(0.66) = 0.1060$ | $u^*(k)_{02}(0.66) = -0.1400$ |
| $J_{02}^*(0.68) = 0.1123$ | $u^*(k)_{02}(0.68) = -0.1400$ |
| $J_{02}^*(0.70) = 0.1189$ | $u^*(k)_{02}(0.70) = -0.1400$ |
| $J_{02}^*(0.72) = 0.1259$ | $u^*(k)_{02}(0.72) = -0.1400$ |
| $J_{02}^*(0.74) = 0.1331$ | $u^*(k)_{02}(0.74) = -0.1400$ |
| $J_{02}^*(0.76) = 0.1402$ | $u^*(k)_{02}(0.76) = -0.1600$ |
| $J_{02}^*(0.78) = 0.1475$ | $u^*(k)_{02}(0.78) = -0.1600$ |
| $J_{02}^*(0.80) = 0.1551$ | $u^*(k)_{02}(0.80) = -0.1600$ |
| $J_{02}^*(0.82) = 0.1630$ | $u^*(k)_{02}(0.82) = -0.1600$ |
| $J_{02}^*(0.84) = 0.1712$ | $u^*(k)_{02}(0.84) = -0.1600$ |
| $J_{02}^*(0.86) = 0.1793$ | $u^*(k)_{02}(0.86) = -0.1800$ |
| $J_{02}^*(0.88) = 0.1876$ | $u^*(k)_{02}(0.88) = -0.1800$ |
| $J_{02}^*(0.90) = 0.1961$ | $u^*(k)_{02}(0.90) = -0.1800$ |
| $J_{02}^*(0.92) = 0.2050$ | $u^*(k)_{02}(0.92) = -0.1800$ |
| $J_{02}^*(0.94) = 0.2141$ | $u^*(k)_{02}(0.94) = -0.1800$ |
| $J_{02}^*(0.96) = 0.2232$ | $u^*(k)_{02}(0.96) = -0.2000$ |
| $J_{02}^*(0.98) = 0.2324$ | $u^*(k)_{02}(0.98) = -0.2000$ |
| $J_{02}^*(1.00) = 0.2419$ | $u^*(k)_{02}(1.00) = -0.2000$ |
| $J_{02}^*(1.02) = 0.2517$ | $u^*(k)_{02}(1.02) = -0.2000$ |
| $J_{02}^*(1.04) = 0.2618$ | $u^*(k)_{02}(1.04) = -0.2000$ |
| $J_{02}^*(1.06) = 0.2719$ | $u^*(k)_{02}(1.06) = -0.2200$ |
| $J_{02}^*(1.08) = 0.2820$ | $u^*(k)_{02}(1.08) = -0.2200$ |
| $J_{02}^*(1.10) = 0.2925$ | $u^*(k)_{02}(1.10) = -0.2200$ |
| $J_{02}^*(0.02) = 0.0001$ | $u^*(k)_{02}(0.02) = 0.0000$  |
| $J_{02}^*(0.04) = 0.0005$ | $u^*(k)_{02}(0.04) = 0.0000$  |
| $J_{02}^*(0.06) = 0.0010$ | $u^*(k)_{02}(0.06) = -0.0200$ |
| $J_{02}^*(0.08) = 0.0015$ | $u^*(k)_{02}(0.08) = -0.0200$ |
| $J_{02}^*(0.10) = 0.0022$ | $u^*(k)_{02}(0.10) = -0.0200$ |
| $J_{02}^*(0.12) = 0.0033$ | $u^*(k)_{02}(0.12) = -0.0200$ |
| $J_{02}^*(0.14) = 0.0046$ | $u^*(k)_{02}(0.14) = -0.0200$ |

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|---------------------------|-------------------------------|
| $J_{02}^*(0.16) = 0.0061$ | $u^*(k)_{02}(0.16) = -0.0400$ |
| $J_{02}^*(0.18) = 0.0075$ | $u^*(k)_{02}(0.18) = -0.0400$ |
| $J_{02}^*(0.20) = 0.0092$ | $u^*(k)_{02}(0.20) = -0.0400$ |
| $J_{02}^*(0.22) = 0.0112$ | $u^*(k)_{02}(0.22) = -0.0400$ |
| $J_{02}^*(0.24) = 0.0135$ | $u^*(k)_{02}(0.24) = -0.0400$ |
| $J_{02}^*(0.26) = 0.0160$ | $u^*(k)_{02}(0.26) = -0.0600$ |
| $J_{02}^*(0.28) = 0.0184$ | $u^*(k)_{02}(0.28) = -0.0600$ |
| $J_{02}^*(0.30) = 0.0210$ | $u^*(k)_{02}(0.30) = -0.0600$ |
| $J_{02}^*(0.32) = 0.0240$ | $u^*(k)_{02}(0.32) = -0.0600$ |
| $J_{02}^*(0.34) = 0.0273$ | $u^*(k)_{02}(0.34) = -0.0600$ |
| $J_{02}^*(0.36) = 0.0306$ | $u^*(k)_{02}(0.36) = -0.0800$ |
| $J_{02}^*(0.38) = 0.0340$ | $u^*(k)_{02}(0.38) = -0.0800$ |
| $J_{02}^*(0.40) = 0.0376$ | $u^*(k)_{02}(0.40) = -0.0800$ |
| $J_{02}^*(0.42) = 0.0416$ | $u^*(k)_{02}(0.42) = -0.0800$ |
| $J_{02}^*(0.44) = 0.0458$ | $u^*(k)_{02}(0.44) = -0.0800$ |
| $J_{02}^*(0.46) = 0.0501$ | $u^*(k)_{02}(0.46) = -0.1000$ |
| $J_{02}^*(0.48) = 0.0544$ | $u^*(k)_{02}(0.48) = -0.1000$ |
| $J_{02}^*(0.50) = 0.0590$ | $u^*(k)_{02}(0.50) = -0.1000$ |
| $J_{02}^*(0.52) = 0.0639$ | $u^*(k)_{02}(0.52) = -0.1000$ |
| $J_{02}^*(0.54) = 0.0691$ | $u^*(k)_{02}(0.54) = -0.1000$ |
| $J_{02}^*(0.56) = 0.0744$ | $u^*(k)_{02}(0.56) = -0.1200$ |
| $J_{02}^*(0.58) = 0.0797$ | $u^*(k)_{02}(0.58) = -0.1200$ |
| $J_{02}^*(0.60) = 0.0853$ | $u^*(k)_{02}(0.60) = -0.1200$ |
| $J_{02}^*(0.62) = 0.0911$ | $u^*(k)_{02}(0.62) = -0.1200$ |
| $J_{02}^*(0.64) = 0.0972$ | $u^*(k)_{02}(0.64) = -0.1200$ |
| $J_{02}^*(0.66) = 0.1035$ | $u^*(k)_{02}(0.66) = -0.1400$ |
| $J_{02}^*(0.68) = 0.1097$ | $u^*(k)_{02}(0.68) = -0.1400$ |
| $J_{02}^*(0.70) = 0.1163$ | $u^*(k)_{02}(0.70) = -0.1400$ |
| $J_{02}^*(0.72) = 0.1231$ | $u^*(k)_{02}(0.72) = -0.1400$ |
| $J_{02}^*(0.74) = 0.1302$ | $u^*(k)_{02}(0.74) = -0.1400$ |
| $J_{02}^*(0.76) = 0.1374$ | $u^*(k)_{02}(0.76) = -0.1600$ |
| $J_{02}^*(0.78) = 0.1446$ | $u^*(k)_{02}(0.78) = -0.1600$ |
| $J_{02}^*(0.80) = 0.1521$ | $u^*(k)_{02}(0.80) = -0.1600$ |
| $J_{02}^*(0.82) = 0.1598$ | $u^*(k)_{02}(0.82) = -0.1600$ |
| $J_{02}^*(0.84) = 0.1679$ | $u^*(k)_{02}(0.84) = -0.1600$ |
| $J_{02}^*(0.86) = 0.1761$ | $u^*(k)_{02}(0.86) = -0.1800$ |
| $J_{02}^*(0.88) = 0.1842$ | $u^*(k)_{02}(0.88) = -0.1800$ |
| $J_{02}^*(0.90) = 0.1927$ | $u^*(k)_{02}(0.90) = -0.1800$ |
| $J_{02}^*(0.92) = 0.2014$ | $u^*(k)_{02}(0.92) = -0.1800$ |
| $J_{02}^*(0.94) = 0.2104$ | $u^*(k)_{02}(0.94) = -0.1800$ |
| $J_{02}^*(0.96) = 0.2196$ | $u^*(k)_{02}(0.96) = -0.2000$ |
| $J_{02}^*(0.98) = 0.2287$ | $u^*(k)_{02}(0.98) = -0.2000$ |
| $J_{02}^*(1.00) = 0.2381$ | $u^*(k)_{02}(1.00) = -0.2000$ |
| $J_{02}^*(1.02) = 0.2478$ | $u^*(k)_{02}(1.02) = -0.2000$ |
| $J_{02}^*(1.04) = 0.2577$ | $u^*(k)_{02}(1.04) = -0.2000$ |
| $J_{02}^*(1.06) = 0.2679$ | $u^*(k)_{02}(1.06) = -0.2200$ |
| $J_{02}^*(1.08) = 0.2779$ | $u^*(k)_{02}(1.08) = -0.2200$ |
| $J_{02}^*(1.10) = 0.2883$ | $u^*(k)_{02}(1.10) = -0.2200$ |
| $J_{02}^*(1.12) = 0.2989$ | $u^*(k)_{02}(1.12) = -0.2200$ |
| $J_{02}^*(0.01) = 0.0000$ | $u^*(k)_{02}(0.01) = 0.0000$  |
| $J_{02}^*(0.03) = 0.0003$ | $u^*(k)_{02}(0.03) = 0.0000$  |
| $J_{02}^*(0.05) = 0.0008$ | $u^*(k)_{02}(0.05) = 0.0000$  |
| $J_{02}^*(0.07) = 0.0012$ | $u^*(k)_{02}(0.07) = -0.0200$ |
| $J_{02}^*(0.09) = 0.0019$ | $u^*(k)_{02}(0.09) = -0.0200$ |

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|---------------------------|-------------------------------|
| $J_{02}^*(0.11) = 0.0028$ | $u^*(k)_{02}(0.11) = -0.0200$ |
| $J_{02}^*(0.13) = 0.0040$ | $u^*(k)_{02}(0.13) = -0.0200$ |
| $J_{02}^*(0.15) = 0.0055$ | $u^*(k)_{02}(0.15) = -0.0200$ |
| $J_{02}^*(0.17) = 0.0069$ | $u^*(k)_{02}(0.17) = -0.0400$ |
| $J_{02}^*(0.19) = 0.0085$ | $u^*(k)_{02}(0.19) = -0.0400$ |
| $J_{02}^*(0.21) = 0.0104$ | $u^*(k)_{02}(0.21) = -0.0400$ |
| $J_{02}^*(0.23) = 0.0126$ | $u^*(k)_{02}(0.23) = -0.0400$ |
| $J_{02}^*(0.25) = 0.0150$ | $u^*(k)_{02}(0.25) = -0.0400$ |
| $J_{02}^*(0.27) = 0.0174$ | $u^*(k)_{02}(0.27) = -0.0600$ |
| $J_{02}^*(0.29) = 0.0199$ | $u^*(k)_{02}(0.29) = -0.0600$ |
| $J_{02}^*(0.31) = 0.0228$ | $u^*(k)_{02}(0.31) = -0.0600$ |
| $J_{02}^*(0.33) = 0.0259$ | $u^*(k)_{02}(0.33) = -0.0600$ |
| $J_{02}^*(0.35) = 0.0293$ | $u^*(k)_{02}(0.35) = -0.0600$ |
| $J_{02}^*(0.37) = 0.0326$ | $u^*(k)_{02}(0.37) = -0.0800$ |
| $J_{02}^*(0.39) = 0.0361$ | $u^*(k)_{02}(0.39) = -0.0800$ |
| $J_{02}^*(0.41) = 0.0400$ | $u^*(k)_{02}(0.41) = -0.0800$ |
| $J_{02}^*(0.43) = 0.0441$ | $u^*(k)_{02}(0.43) = -0.0800$ |
| $J_{02}^*(0.45) = 0.0484$ | $u^*(k)_{02}(0.45) = -0.0800$ |
| $J_{02}^*(0.47) = 0.0527$ | $u^*(k)_{02}(0.47) = -0.1000$ |
| $J_{02}^*(0.49) = 0.0572$ | $u^*(k)_{02}(0.49) = -0.1000$ |
| $J_{02}^*(0.51) = 0.0619$ | $u^*(k)_{02}(0.51) = -0.1000$ |
| $J_{02}^*(0.53) = 0.0670$ | $u^*(k)_{02}(0.53) = -0.1000$ |
| $J_{02}^*(0.55) = 0.0723$ | $u^*(k)_{02}(0.55) = -0.1000$ |
| $J_{02}^*(0.57) = 0.0776$ | $u^*(k)_{02}(0.57) = -0.1200$ |
| $J_{02}^*(0.59) = 0.0830$ | $u^*(k)_{02}(0.59) = -0.1200$ |
| $J_{02}^*(0.61) = 0.0887$ | $u^*(k)_{02}(0.61) = -0.1200$ |
| $J_{02}^*(0.63) = 0.0947$ | $u^*(k)_{02}(0.63) = -0.1200$ |
| $J_{02}^*(0.65) = 0.1011$ | $u^*(k)_{02}(0.65) = -0.1200$ |
| $J_{02}^*(0.67) = 0.1072$ | $u^*(k)_{02}(0.67) = -0.1400$ |
| $J_{02}^*(0.69) = 0.1136$ | $u^*(k)_{02}(0.69) = -0.1400$ |
| $J_{02}^*(0.71) = 0.1203$ | $u^*(k)_{02}(0.71) = -0.1400$ |
| $J_{02}^*(0.73) = 0.1273$ | $u^*(k)_{02}(0.73) = -0.1400$ |
| $J_{02}^*(0.75) = 0.1346$ | $u^*(k)_{02}(0.75) = -0.1400$ |
| $J_{02}^*(0.77) = 0.1417$ | $u^*(k)_{02}(0.77) = -0.1600$ |
| $J_{02}^*(0.79) = 0.1490$ | $u^*(k)_{02}(0.79) = -0.1600$ |
| $J_{02}^*(0.81) = 0.1567$ | $u^*(k)_{02}(0.81) = -0.1600$ |
| $J_{02}^*(0.83) = 0.1646$ | $u^*(k)_{02}(0.83) = -0.1600$ |
| $J_{02}^*(0.85) = 0.1729$ | $u^*(k)_{02}(0.85) = -0.1600$ |
| $J_{02}^*(0.87) = 0.1809$ | $u^*(k)_{02}(0.87) = -0.1800$ |
| $J_{02}^*(0.89) = 0.1893$ | $u^*(k)_{02}(0.89) = -0.1800$ |
| $J_{02}^*(0.91) = 0.1979$ | $u^*(k)_{02}(0.91) = -0.1800$ |
| $J_{02}^*(0.93) = 0.2068$ | $u^*(k)_{02}(0.93) = -0.1800$ |
| $J_{02}^*(0.95) = 0.2160$ | $u^*(k)_{02}(0.95) = -0.1800$ |
| $J_{02}^*(0.97) = 0.2250$ | $u^*(k)_{02}(0.97) = -0.2000$ |
| $J_{02}^*(0.99) = 0.2343$ | $u^*(k)_{02}(0.99) = -0.2000$ |
| $J_{02}^*(1.01) = 0.2439$ | $u^*(k)_{02}(1.01) = -0.2000$ |
| $J_{02}^*(1.03) = 0.2537$ | $u^*(k)_{02}(1.03) = -0.2000$ |
| $J_{02}^*(1.05) = 0.2639$ | $u^*(k)_{02}(1.05) = -0.2000$ |
| $J_{02}^*(1.07) = 0.2739$ | $u^*(k)_{02}(1.07) = -0.2200$ |
| $J_{02}^*(1.09) = 0.2841$ | $u^*(k)_{02}(1.09) = -0.2200$ |
| $J_{02}^*(1.11) = 0.2946$ | $u^*(k)_{02}(1.11) = -0.2200$ |
| $J_{02}^*(1.13) = 0.3055$ | $u^*(k)_{02}(1.13) = -0.2200$ |
| $J_{02}^*(1.10) = 0.2904$ | $u^*(k)_{02}(1.10) = -0.2200$ |
| $J_{02}^*(1.12) = 0.3011$ | $u^*(k)_{02}(1.12) = -0.2200$ |



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|---------------------------|-------------------------------|
| $J_{02}^*(1.14) = 0.3121$ | $u^*(k)_{02}(1.14) = -0.2200$ |
| $J_{02}^*(1.11) = 0.2968$ | $u^*(k)_{02}(1.11) = -0.2200$ |
| $J_{02}^*(1.13) = 0.3077$ | $u^*(k)_{02}(1.13) = -0.2200$ |
| $J_{02}^*(1.15) = 0.3188$ | $u^*(k)_{02}(1.15) = -0.2400$ |
| $J_{02}^*(1.12) = 0.3033$ | $u^*(k)_{02}(1.12) = -0.2200$ |
| $J_{02}^*(1.14) = 0.3143$ | $u^*(k)_{02}(1.14) = -0.2200$ |
| $J_{02}^*(1.16) = 0.3253$ | $u^*(k)_{02}(1.16) = -0.2400$ |
| $J_{02}^*(1.14) = 0.3099$ | $u^*(k)_{02}(1.14) = -0.2200$ |
| $J_{02}^*(1.16) = 0.3210$ | $u^*(k)_{02}(1.16) = -0.2400$ |
| $J_{02}^*(1.18) = 0.3320$ | $u^*(k)_{02}(1.18) = -0.2400$ |
| $J_{02}^*(1.15) = 0.3166$ | $u^*(k)_{02}(1.15) = -0.2200$ |
| $J_{02}^*(1.17) = 0.3275$ | $u^*(k)_{02}(1.17) = -0.2400$ |
| $J_{02}^*(1.19) = 0.3387$ | $u^*(k)_{02}(1.19) = -0.2400$ |
| $J_{02}^*(1.16) = 0.3231$ | $u^*(k)_{02}(1.16) = -0.2400$ |
| $J_{02}^*(1.18) = 0.3342$ | $u^*(k)_{02}(1.18) = -0.2400$ |
| $J_{02}^*(1.20) = 0.3456$ | $u^*(k)_{02}(1.20) = -0.2400$ |
| $J_{02}^*(1.17) = 0.3298$ | $u^*(k)_{02}(1.17) = -0.2400$ |
| $J_{02}^*(1.19) = 0.3410$ | $u^*(k)_{02}(1.19) = -0.2400$ |
| $J_{02}^*(1.21) = 0.3526$ | $u^*(k)_{02}(1.21) = -0.2400$ |
| $J_{02}^*(1.18) = 0.3365$ | $u^*(k)_{02}(1.18) = -0.2400$ |
| $J_{02}^*(1.20) = 0.3479$ | $u^*(k)_{02}(1.20) = -0.2400$ |
| $J_{02}^*(1.22) = 0.3596$ | $u^*(k)_{02}(1.22) = -0.2400$ |
| $J_{02}^*(1.20) = 0.3433$ | $u^*(k)_{02}(1.20) = -0.2400$ |
| $J_{02}^*(1.22) = 0.3549$ | $u^*(k)_{02}(1.22) = -0.2400$ |
| $J_{02}^*(1.24) = 0.3668$ | $u^*(k)_{02}(1.24) = -0.2400$ |
| $J_{02}^*(1.21) = 0.3502$ | $u^*(k)_{02}(1.21) = -0.2400$ |
| $J_{02}^*(1.23) = 0.3620$ | $u^*(k)_{02}(1.23) = -0.2400$ |
| $J_{02}^*(1.25) = 0.3741$ | $u^*(k)_{02}(1.25) = -0.2400$ |
| $J_{02}^*(1.22) = 0.3573$ | $u^*(k)_{02}(1.22) = -0.2400$ |
| $J_{02}^*(1.24) = 0.3692$ | $u^*(k)_{02}(1.24) = -0.2400$ |
| $J_{02}^*(1.26) = 0.3812$ | $u^*(k)_{02}(1.26) = -0.2600$ |
| $J_{02}^*(1.23) = 0.3644$ | $u^*(k)_{02}(1.23) = -0.2400$ |
| $J_{02}^*(1.25) = 0.3765$ | $u^*(k)_{02}(1.25) = -0.2600$ |
| $J_{02}^*(1.27) = 0.3884$ | $u^*(k)_{02}(1.27) = -0.2600$ |
| $J_{02}^*(1.24) = 0.3716$ | $u^*(k)_{02}(1.24) = -0.2400$ |
| $J_{02}^*(1.26) = 0.3836$ | $u^*(k)_{02}(1.26) = -0.2600$ |
| $J_{02}^*(1.28) = 0.3957$ | $u^*(k)_{02}(1.28) = -0.2600$ |
| $J_{02}^*(1.26) = 0.3788$ | $u^*(k)_{02}(1.26) = -0.2600$ |
| $J_{02}^*(1.28) = 0.3908$ | $u^*(k)_{02}(1.28) = -0.2600$ |
| $J_{02}^*(1.30) = 0.4031$ | $u^*(k)_{02}(1.30) = -0.2600$ |
| $J_{02}^*(1.27) = 0.3860$ | $u^*(k)_{02}(1.27) = -0.2600$ |
| $J_{02}^*(1.29) = 0.3982$ | $u^*(k)_{02}(1.29) = -0.2600$ |
| $J_{02}^*(1.31) = 0.4106$ | $u^*(k)_{02}(1.31) = -0.2600$ |
| $J_{02}^*(1.28) = 0.3933$ | $u^*(k)_{02}(1.28) = -0.2600$ |
| $J_{02}^*(1.30) = 0.4056$ | $u^*(k)_{02}(1.30) = -0.2600$ |
| $J_{02}^*(1.32) = 0.4182$ | $u^*(k)_{02}(1.32) = -0.2600$ |
| $J_{02}^*(1.29) = 0.4006$ | $u^*(k)_{02}(1.29) = -0.2600$ |
| $J_{02}^*(1.31) = 0.4131$ | $u^*(k)_{02}(1.31) = -0.2600$ |
| $J_{02}^*(1.33) = 0.4259$ | $u^*(k)_{02}(1.33) = -0.2600$ |
| $J_{02}^*(1.30) = 0.4081$ | $u^*(k)_{02}(1.30) = -0.2600$ |
| $J_{02}^*(1.32) = 0.4208$ | $u^*(k)_{02}(1.32) = -0.2600$ |
| $J_{02}^*(1.34) = 0.4338$ | $u^*(k)_{02}(1.34) = -0.2600$ |
| $J_{02}^*(1.32) = 0.4157$ | $u^*(k)_{02}(1.32) = -0.2600$ |
| $J_{02}^*(1.34) = 0.4285$ | $u^*(k)_{02}(1.34) = -0.2600$ |

|                           |                               |
|---------------------------|-------------------------------|
| $J_{02}^*(1.36) = 0.4415$ | $u^*(k)_{02}(1.36) = -0.2800$ |
| $J_{02}^*(1.33) = 0.4234$ | $u^*(k)_{02}(1.33) = -0.2600$ |
| $J_{02}^*(1.35) = 0.4364$ | $u^*(k)_{02}(1.35) = -0.2600$ |
| $J_{02}^*(1.37) = 0.4493$ | $u^*(k)_{02}(1.37) = -0.2800$ |
| $J_{02}^*(1.34) = 0.4311$ | $u^*(k)_{02}(1.34) = -0.2600$ |
| $J_{02}^*(1.36) = 0.4441$ | $u^*(k)_{02}(1.36) = -0.2800$ |
| $J_{02}^*(1.38) = 0.4571$ | $u^*(k)_{02}(1.38) = -0.2800$ |
| $J_{02}^*(1.35) = 0.4390$ | $u^*(k)_{02}(1.35) = -0.2800$ |
| $J_{02}^*(1.37) = 0.4519$ | $u^*(k)_{02}(1.37) = -0.2800$ |
| $J_{02}^*(1.39) = 0.4650$ | $u^*(k)_{02}(1.39) = -0.2800$ |
| $J_{02}^*(1.36) = 0.4467$ | $u^*(k)_{02}(1.36) = -0.2800$ |
| $J_{02}^*(1.38) = 0.4597$ | $u^*(k)_{02}(1.38) = -0.2800$ |
| $J_{02}^*(1.40) = 0.4731$ | $u^*(k)_{02}(1.40) = -0.2800$ |
| $J_{02}^*(1.38) = 0.4545$ | $u^*(k)_{02}(1.38) = -0.2800$ |
| $J_{02}^*(1.40) = 0.4677$ | $u^*(k)_{02}(1.40) = -0.2800$ |
| $J_{02}^*(1.42) = 0.4812$ | $u^*(k)_{02}(1.42) = -0.2800$ |
| $J_{02}^*(1.39) = 0.4624$ | $u^*(k)_{02}(1.39) = -0.2800$ |
| $J_{02}^*(1.41) = 0.4758$ | $u^*(k)_{02}(1.41) = -0.2800$ |
| $J_{02}^*(1.43) = 0.4895$ | $u^*(k)_{02}(1.43) = -0.2800$ |
| $J_{02}^*(1.40) = 0.4704$ | $u^*(k)_{02}(1.40) = -0.2800$ |
| $J_{02}^*(1.42) = 0.4840$ | $u^*(k)_{02}(1.42) = -0.2800$ |
| $J_{02}^*(1.44) = 0.4979$ | $u^*(k)_{02}(1.44) = -0.2800$ |
| $J_{02}^*(1.41) = 0.4785$ | $u^*(k)_{02}(1.41) = -0.2800$ |
| $J_{02}^*(1.43) = 0.4923$ | $u^*(k)_{02}(1.43) = -0.2800$ |
| $J_{02}^*(1.45) = 0.5063$ | $u^*(k)_{02}(1.45) = -0.3000$ |
| $J_{02}^*(1.42) = 0.4867$ | $u^*(k)_{02}(1.42) = -0.2800$ |
| $J_{02}^*(1.44) = 0.5007$ | $u^*(k)_{02}(1.44) = -0.2800$ |
| $J_{02}^*(1.46) = 0.5145$ | $u^*(k)_{02}(1.46) = -0.3000$ |
| $J_{02}^*(1.44) = 0.4951$ | $u^*(k)_{02}(1.44) = -0.2800$ |
| $J_{02}^*(1.46) = 0.5090$ | $u^*(k)_{02}(1.46) = -0.3000$ |
| $J_{02}^*(1.48) = 0.5229$ | $u^*(k)_{02}(1.48) = -0.3000$ |
| $J_{02}^*(1.45) = 0.5035$ | $u^*(k)_{02}(1.45) = -0.2800$ |
| $J_{02}^*(1.47) = 0.5173$ | $u^*(k)_{02}(1.47) = -0.3000$ |
| $J_{02}^*(1.49) = 0.5314$ | $u^*(k)_{02}(1.49) = -0.3000$ |
| $J_{02}^*(1.46) = 0.5118$ | $u^*(k)_{02}(1.46) = -0.3000$ |
| $J_{02}^*(1.48) = 0.5257$ | $u^*(k)_{02}(1.48) = -0.3000$ |
| $J_{02}^*(1.50) = 0.5400$ | $u^*(k)_{02}(1.50) = -0.3000$ |
| $J_{02}^*(1.47) = 0.5201$ | $u^*(k)_{02}(1.47) = -0.3000$ |
| $J_{02}^*(1.49) = 0.5343$ | $u^*(k)_{02}(1.49) = -0.3000$ |
| $J_{02}^*(1.48) = 0.5286$ | $u^*(k)_{02}(1.48) = -0.3000$ |
| $J_{02}^*(1.50) = 0.5371$ | $u^*(k)_{02}(1.50) = -0.3000$ |
| $J_{12}^*(0.00) = 0.0000$ | $u^*(k)_{13}(0.00) = 0.0000$  |
| $J_{12}^*(0.02) = 0.0001$ | $u^*(k)_{13}(0.02) = 0.0000$  |
| $J_{12}^*(0.04) = 0.0002$ | $u^*(k)_{13}(0.04) = 0.0000$  |
| $J_{12}^*(0.06) = 0.0005$ | $u^*(k)_{13}(0.06) = 0.0000$  |
| $J_{12}^*(0.08) = 0.0008$ | $u^*(k)_{13}(0.08) = 0.0000$  |
| $J_{12}^*(0.10) = 0.0011$ | $u^*(k)_{13}(0.10) = 0.0000$  |
| $J_{12}^*(0.12) = 0.0013$ | $u^*(k)_{13}(0.12) = 0.0000$  |
| $J_{12}^*(0.14) = 0.0017$ | $u^*(k)_{13}(0.14) = 0.0000$  |
| $J_{12}^*(0.16) = 0.0022$ | $u^*(k)_{13}(0.16) = 0.0000$  |
| $J_{12}^*(0.18) = 0.0027$ | $u^*(k)_{13}(0.18) = -0.0200$ |
| $J_{12}^*(0.20) = 0.0032$ | $u^*(k)_{13}(0.20) = -0.0200$ |
| $J_{12}^*(0.22) = 0.0038$ | $u^*(k)_{13}(0.22) = -0.0200$ |
| $J_{12}^*(0.24) = 0.0046$ | $u^*(k)_{13}(0.24) = -0.0200$ |

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|---------------------------|-------------------------------|
| $J_{12}^*(0.26) = 0.0054$ | $u^*(k)_{13}(0.26) = -0.0200$ |
| $J_{12}^*(0.28) = 0.0063$ | $u^*(k)_{13}(0.28) = -0.0200$ |
| $J_{12}^*(0.30) = 0.0071$ | $u^*(k)_{13}(0.30) = -0.0200$ |
| $J_{12}^*(0.32) = 0.0080$ | $u^*(k)_{13}(0.32) = -0.0200$ |
| $J_{12}^*(0.34) = 0.0090$ | $u^*(k)_{13}(0.34) = -0.0200$ |
| $J_{12}^*(0.36) = 0.0100$ | $u^*(k)_{13}(0.36) = -0.0200$ |
| $J_{12}^*(0.38) = 0.0112$ | $u^*(k)_{13}(0.38) = -0.0200$ |
| $J_{12}^*(0.40) = 0.0125$ | $u^*(k)_{13}(0.40) = -0.0200$ |
| $J_{12}^*(0.42) = 0.0138$ | $u^*(k)_{13}(0.42) = -0.0200$ |
| $J_{12}^*(0.44) = 0.0153$ | $u^*(k)_{13}(0.44) = -0.0400$ |
| $J_{12}^*(0.46) = 0.0167$ | $u^*(k)_{13}(0.46) = -0.0400$ |
| $J_{12}^*(0.48) = 0.0182$ | $u^*(k)_{13}(0.48) = -0.0200$ |
| $J_{12}^*(0.50) = 0.0196$ | $u^*(k)_{13}(0.50) = -0.0400$ |
| $J_{12}^*(0.52) = 0.0211$ | $u^*(k)_{13}(0.52) = -0.0400$ |
| $J_{12}^*(0.54) = 0.0226$ | $u^*(k)_{13}(0.54) = -0.0400$ |
| $J_{12}^*(0.56) = 0.0242$ | $u^*(k)_{13}(0.56) = -0.0400$ |
| $J_{12}^*(0.58) = 0.0260$ | $u^*(k)_{13}(0.58) = -0.0400$ |
| $J_{12}^*(0.60) = 0.0278$ | $u^*(k)_{13}(0.60) = -0.0400$ |
| $J_{12}^*(0.62) = 0.0298$ | $u^*(k)_{13}(0.62) = -0.0400$ |
| $J_{12}^*(0.64) = 0.0318$ | $u^*(k)_{13}(0.64) = -0.0400$ |
| $J_{12}^*(0.66) = 0.0338$ | $u^*(k)_{13}(0.66) = -0.0400$ |
| $J_{12}^*(0.68) = 0.0358$ | $u^*(k)_{13}(0.68) = -0.0400$ |
| $J_{12}^*(0.70) = 0.0379$ | $u^*(k)_{13}(0.70) = -0.0400$ |
| $J_{12}^*(0.72) = 0.0401$ | $u^*(k)_{13}(0.72) = -0.0400$ |
| $J_{12}^*(0.74) = 0.0424$ | $u^*(k)_{13}(0.74) = -0.0400$ |
| $J_{12}^*(0.76) = 0.0448$ | $u^*(k)_{13}(0.76) = -0.0400$ |
| $J_{12}^*(0.78) = 0.0472$ | $u^*(k)_{13}(0.78) = -0.0600$ |
| $J_{12}^*(0.80) = 0.0496$ | $u^*(k)_{13}(0.80) = -0.0600$ |
| $J_{12}^*(0.82) = 0.0521$ | $u^*(k)_{13}(0.82) = -0.0600$ |
| $J_{12}^*(0.84) = 0.0547$ | $u^*(k)_{13}(0.84) = -0.0600$ |
| $J_{12}^*(0.86) = 0.0573$ | $u^*(k)_{13}(0.86) = -0.0600$ |
| $J_{12}^*(0.88) = 0.0599$ | $u^*(k)_{13}(0.88) = -0.0600$ |
| $J_{12}^*(0.90) = 0.0625$ | $u^*(k)_{13}(0.90) = -0.0600$ |
| $J_{12}^*(0.92) = 0.0653$ | $u^*(k)_{13}(0.92) = -0.0600$ |
| $J_{12}^*(0.94) = 0.0682$ | $u^*(k)_{13}(0.94) = -0.0600$ |
| $J_{12}^*(0.96) = 0.0711$ | $u^*(k)_{13}(0.96) = -0.0600$ |
| $J_{12}^*(0.98) = 0.0742$ | $u^*(k)_{13}(0.98) = -0.0600$ |
| $J_{12}^*(1.00) = 0.0774$ | $u^*(k)_{13}(1.00) = -0.0600$ |
| $J_{12}^*(1.02) = 0.0806$ | $u^*(k)_{13}(1.02) = -0.0600$ |
| $J_{12}^*(1.04) = 0.0837$ | $u^*(k)_{13}(1.04) = -0.0600$ |
| $J_{12}^*(1.06) = 0.0869$ | $u^*(k)_{13}(1.06) = -0.0600$ |
| $J_{12}^*(1.08) = 0.0902$ | $u^*(k)_{13}(1.08) = -0.0600$ |
| $J_{12}^*(1.10) = 0.0936$ | $u^*(k)_{13}(1.10) = -0.0800$ |
| $J_{12}^*(1.12) = 0.0969$ | $u^*(k)_{13}(1.12) = -0.0800$ |
| $J_{12}^*(1.14) = 0.1004$ | $u^*(k)_{13}(1.14) = -0.0800$ |
| $J_{12}^*(1.16) = 0.1039$ | $u^*(k)_{13}(1.16) = -0.0800$ |
| $J_{12}^*(1.18) = 0.1075$ | $u^*(k)_{13}(1.18) = -0.0800$ |
| $J_{12}^*(1.20) = 0.1113$ | $u^*(k)_{13}(1.20) = -0.0800$ |
| $J_{12}^*(1.22) = 0.1151$ | $u^*(k)_{13}(1.22) = -0.0800$ |
| $J_{12}^*(1.24) = 0.1188$ | $u^*(k)_{13}(1.24) = -0.0800$ |
| $J_{12}^*(1.26) = 0.1225$ | $u^*(k)_{13}(1.26) = -0.0800$ |
| $J_{12}^*(1.28) = 0.1264$ | $u^*(k)_{13}(1.28) = -0.0800$ |
| $J_{12}^*(1.30) = 0.1304$ | $u^*(k)_{13}(1.30) = -0.0800$ |
| $J_{12}^*(1.32) = 0.1345$ | $u^*(k)_{13}(1.32) = -0.0800$ |

|                           |                               |
|---------------------------|-------------------------------|
| $J_{12}^*(1.34) = 0.1387$ | $u^*(k)_{13}(1.34) = -0.0800$ |
| $J_{12}^*(1.36) = 0.1430$ | $u^*(k)_{13}(1.36) = -0.0800$ |
| $J_{12}^*(1.38) = 0.1473$ | $u^*(k)_{13}(1.38) = -0.1000$ |
| $J_{12}^*(1.40) = 0.1516$ | $u^*(k)_{13}(1.40) = -0.0800$ |
| $J_{12}^*(1.42) = 0.1559$ | $u^*(k)_{13}(1.42) = -0.0800$ |
| $J_{12}^*(1.44) = 0.1602$ | $u^*(k)_{13}(1.44) = -0.1000$ |
| $J_{12}^*(1.46) = 0.1646$ | $u^*(k)_{13}(1.46) = -0.1000$ |
| $J_{12}^*(1.48) = 0.1690$ | $u^*(k)_{13}(1.48) = -0.1000$ |
| $J_{12}^*(1.50) = 0.1736$ | $u^*(k)_{13}(1.50) = -0.1000$ |

### 3-16 Part (c)

|                           |                               |
|---------------------------|-------------------------------|
| $J_{02}^*(0.00) = 0.0000$ | $u^*(k)_{02}(0.00) = 0.0000$  |
| $J_{02}^*(0.02) = 0.0001$ | $u^*(k)_{02}(0.02) = 0.0000$  |
| $J_{02}^*(0.04) = 0.0002$ | $u^*(k)_{02}(0.04) = -0.0200$ |
| $J_{02}^*(0.06) = 0.0005$ | $u^*(k)_{02}(0.06) = -0.0200$ |
| $J_{02}^*(0.08) = 0.0009$ | $u^*(k)_{02}(0.08) = -0.0400$ |
| $J_{02}^*(0.10) = 0.0012$ | $u^*(k)_{02}(0.10) = -0.0400$ |
| $J_{02}^*(0.12) = 0.0018$ | $u^*(k)_{02}(0.12) = -0.0400$ |
| $J_{02}^*(0.14) = 0.0024$ | $u^*(k)_{02}(0.14) = -0.0600$ |
| $J_{02}^*(0.16) = 0.0031$ | $u^*(k)_{02}(0.16) = -0.0600$ |
| $J_{02}^*(0.18) = 0.0040$ | $u^*(k)_{02}(0.18) = -0.0800$ |
| $J_{02}^*(0.20) = 0.0048$ | $u^*(k)_{02}(0.20) = -0.0800$ |
| $J_{02}^*(0.22) = 0.0059$ | $u^*(k)_{02}(0.22) = -0.0800$ |
| $J_{02}^*(0.24) = 0.0069$ | $u^*(k)_{02}(0.24) = -0.1000$ |
| $J_{02}^*(0.26) = 0.0081$ | $u^*(k)_{02}(0.26) = -0.1000$ |
| $J_{02}^*(0.28) = 0.0095$ | $u^*(k)_{02}(0.28) = -0.1200$ |
| $J_{02}^*(0.30) = 0.0108$ | $u^*(k)_{02}(0.30) = -0.1200$ |
| $J_{02}^*(0.32) = 0.0124$ | $u^*(k)_{02}(0.32) = -0.1200$ |
| $J_{02}^*(0.34) = 0.0139$ | $u^*(k)_{02}(0.34) = -0.1400$ |
| $J_{02}^*(0.36) = 0.0156$ | $u^*(k)_{02}(0.36) = -0.1400$ |
| $J_{02}^*(0.38) = 0.0174$ | $u^*(k)_{02}(0.38) = -0.1600$ |
| $J_{02}^*(0.40) = 0.0192$ | $u^*(k)_{02}(0.40) = -0.1600$ |
| $J_{02}^*(0.42) = 0.0213$ | $u^*(k)_{02}(0.42) = -0.1600$ |
| $J_{02}^*(0.44) = 0.0233$ | $u^*(k)_{02}(0.44) = -0.1800$ |
| $J_{02}^*(0.46) = 0.0254$ | $u^*(k)_{02}(0.46) = -0.1800$ |
| $J_{02}^*(0.48) = 0.0277$ | $u^*(k)_{02}(0.48) = -0.2000$ |
| $J_{02}^*(0.50) = 0.0300$ | $u^*(k)_{02}(0.50) = -0.2000$ |
| $J_{02}^*(0.52) = 0.0325$ | $u^*(k)_{02}(0.52) = -0.2000$ |
| $J_{02}^*(0.54) = 0.0350$ | $u^*(k)_{02}(0.54) = -0.2200$ |
| $J_{02}^*(0.56) = 0.0377$ | $u^*(k)_{02}(0.56) = -0.2200$ |
| $J_{02}^*(0.58) = 0.0405$ | $u^*(k)_{02}(0.58) = -0.2400$ |
| $J_{02}^*(0.60) = 0.0432$ | $u^*(k)_{02}(0.60) = -0.2400$ |
| $J_{02}^*(0.62) = 0.0462$ | $u^*(k)_{02}(0.62) = -0.2400$ |
| $J_{02}^*(0.64) = 0.0492$ | $u^*(k)_{02}(0.64) = -0.2600$ |
| $J_{02}^*(0.66) = 0.0523$ | $u^*(k)_{02}(0.66) = -0.2600$ |
| $J_{02}^*(0.68) = 0.0556$ | $u^*(k)_{02}(0.68) = -0.2800$ |
| $J_{02}^*(0.70) = 0.0588$ | $u^*(k)_{02}(0.70) = -0.2800$ |
| $J_{02}^*(0.72) = 0.0623$ | $u^*(k)_{02}(0.72) = -0.2800$ |
| $J_{02}^*(0.74) = 0.0657$ | $u^*(k)_{02}(0.74) = -0.3000$ |
| $J_{02}^*(0.76) = 0.0693$ | $u^*(k)_{02}(0.76) = -0.3000$ |
| $J_{02}^*(0.78) = 0.0731$ | $u^*(k)_{02}(0.78) = -0.3200$ |
| $J_{02}^*(0.80) = 0.0768$ | $u^*(k)_{02}(0.80) = -0.3200$ |
| $J_{02}^*(0.82) = 0.0808$ | $u^*(k)_{02}(0.82) = -0.3200$ |

|                           |                               |
|---------------------------|-------------------------------|
| $J_{02}^*(0.84) = 0.0847$ | $u^*(k)_{02}(0.84) = -0.3400$ |
| $J_{02}^*(0.86) = 0.0888$ | $u^*(k)_{02}(0.86) = -0.3400$ |
| $J_{02}^*(0.88) = 0.0930$ | $u^*(k)_{02}(0.88) = -0.3600$ |
| $J_{02}^*(0.90) = 0.0972$ | $u^*(k)_{02}(0.90) = -0.3600$ |
| $J_{02}^*(0.92) = 0.1017$ | $u^*(k)_{02}(0.92) = -0.3600$ |
| $J_{02}^*(0.94) = 0.1061$ | $u^*(k)_{02}(0.94) = -0.3800$ |
| $J_{02}^*(0.96) = 0.1106$ | $u^*(k)_{02}(0.96) = -0.3800$ |
| $J_{02}^*(0.98) = 0.1153$ | $u^*(k)_{02}(0.98) = -0.4000$ |
| $J_{02}^*(1.00) = 0.1200$ | $u^*(k)_{02}(1.00) = -0.4000$ |
| $J_{02}^*(1.02) = 0.1249$ | $u^*(k)_{02}(1.02) = -0.4000$ |
| $J_{02}^*(1.04) = 0.1298$ | $u^*(k)_{02}(1.04) = -0.4200$ |
| $J_{02}^*(1.06) = 0.1349$ | $u^*(k)_{02}(1.06) = -0.4200$ |
| $J_{02}^*(1.08) = 0.1401$ | $u^*(k)_{02}(1.08) = -0.4400$ |
| $J_{02}^*(0.01) = 0.0001$ | $u^*(k)_{02}(0.01) = 0.0000$  |
| $J_{02}^*(0.03) = 0.0002$ | $u^*(k)_{02}(0.03) = -0.0200$ |
| $J_{02}^*(0.05) = 0.0003$ | $u^*(k)_{02}(0.05) = -0.0200$ |
| $J_{02}^*(0.07) = 0.0007$ | $u^*(k)_{02}(0.07) = -0.0200$ |
| $J_{02}^*(0.09) = 0.0010$ | $u^*(k)_{02}(0.09) = -0.0400$ |
| $J_{02}^*(0.11) = 0.0015$ | $u^*(k)_{02}(0.11) = -0.0400$ |
| $J_{02}^*(0.13) = 0.0022$ | $u^*(k)_{02}(0.13) = -0.0600$ |
| $J_{02}^*(0.15) = 0.0028$ | $u^*(k)_{02}(0.15) = -0.0600$ |
| $J_{02}^*(0.17) = 0.0037$ | $u^*(k)_{02}(0.17) = -0.0600$ |
| $J_{02}^*(0.19) = 0.0044$ | $u^*(k)_{02}(0.19) = -0.0800$ |
| $J_{02}^*(0.21) = 0.0054$ | $u^*(k)_{02}(0.21) = -0.0800$ |
| $J_{02}^*(0.23) = 0.0065$ | $u^*(k)_{02}(0.23) = -0.1000$ |
| $J_{02}^*(0.25) = 0.0076$ | $u^*(k)_{02}(0.25) = -0.1000$ |
| $J_{02}^*(0.27) = 0.0090$ | $u^*(k)_{02}(0.27) = -0.1000$ |
| $J_{02}^*(0.29) = 0.0102$ | $u^*(k)_{02}(0.29) = -0.1200$ |
| $J_{02}^*(0.31) = 0.0117$ | $u^*(k)_{02}(0.31) = -0.1200$ |
| $J_{02}^*(0.33) = 0.0133$ | $u^*(k)_{02}(0.33) = -0.1400$ |
| $J_{02}^*(0.35) = 0.0149$ | $u^*(k)_{02}(0.35) = -0.1400$ |
| $J_{02}^*(0.37) = 0.0167$ | $u^*(k)_{02}(0.37) = -0.1400$ |
| $J_{02}^*(0.39) = 0.0185$ | $u^*(k)_{02}(0.39) = -0.1600$ |
| $J_{02}^*(0.41) = 0.0204$ | $u^*(k)_{02}(0.41) = -0.1600$ |
| $J_{02}^*(0.43) = 0.0225$ | $u^*(k)_{02}(0.43) = -0.1800$ |
| $J_{02}^*(0.45) = 0.0245$ | $u^*(k)_{02}(0.45) = -0.1800$ |
| $J_{02}^*(0.47) = 0.0269$ | $u^*(k)_{02}(0.47) = -0.1800$ |
| $J_{02}^*(0.49) = 0.0291$ | $u^*(k)_{02}(0.49) = -0.2000$ |
| $J_{02}^*(0.51) = 0.0315$ | $u^*(k)_{02}(0.51) = -0.2000$ |
| $J_{02}^*(0.53) = 0.0340$ | $u^*(k)_{02}(0.53) = -0.2200$ |
| $J_{02}^*(0.55) = 0.0366$ | $u^*(k)_{02}(0.55) = -0.2200$ |
| $J_{02}^*(0.57) = 0.0394$ | $u^*(k)_{02}(0.57) = -0.2200$ |
| $J_{02}^*(0.59) = 0.0421$ | $u^*(k)_{02}(0.59) = -0.2400$ |
| $J_{02}^*(0.61) = 0.0450$ | $u^*(k)_{02}(0.61) = -0.2400$ |
| $J_{02}^*(0.63) = 0.0480$ | $u^*(k)_{02}(0.63) = -0.2600$ |
| $J_{02}^*(0.65) = 0.0510$ | $u^*(k)_{02}(0.65) = -0.2600$ |
| $J_{02}^*(0.67) = 0.0543$ | $u^*(k)_{02}(0.67) = -0.2600$ |
| $J_{02}^*(0.69) = 0.0575$ | $u^*(k)_{02}(0.69) = -0.2800$ |
| $J_{02}^*(0.71) = 0.0609$ | $u^*(k)_{02}(0.71) = -0.2800$ |
| $J_{02}^*(0.73) = 0.0644$ | $u^*(k)_{02}(0.73) = -0.3000$ |
| $J_{02}^*(0.75) = 0.0679$ | $u^*(k)_{02}(0.75) = -0.3000$ |
| $J_{02}^*(0.77) = 0.0716$ | $u^*(k)_{02}(0.77) = -0.3000$ |
| $J_{02}^*(0.79) = 0.0753$ | $u^*(k)_{02}(0.79) = -0.3200$ |
| $J_{02}^*(0.81) = 0.0792$ | $u^*(k)_{02}(0.81) = -0.3200$ |

|                           |                               |
|---------------------------|-------------------------------|
| $J_{02}^*(0.83) = 0.0831$ | $u^*(k)_{02}(0.83) = -0.3400$ |
| $J_{02}^*(0.85) = 0.0871$ | $u^*(k)_{02}(0.85) = -0.3400$ |
| $J_{02}^*(0.87) = 0.0914$ | $u^*(k)_{02}(0.87) = -0.3400$ |
| $J_{02}^*(0.89) = 0.0955$ | $u^*(k)_{02}(0.89) = -0.3600$ |
| $J_{02}^*(0.91) = 0.0998$ | $u^*(k)_{02}(0.91) = -0.3600$ |
| $J_{02}^*(0.93) = 0.1043$ | $u^*(k)_{02}(0.93) = -0.3800$ |
| $J_{02}^*(0.95) = 0.1088$ | $u^*(k)_{02}(0.95) = -0.3800$ |
| $J_{02}^*(0.97) = 0.1135$ | $u^*(k)_{02}(0.97) = -0.3800$ |
| $J_{02}^*(0.99) = 0.1181$ | $u^*(k)_{02}(0.99) = -0.4000$ |
| $J_{02}^*(1.01) = 0.1229$ | $u^*(k)_{02}(1.01) = -0.4000$ |
| $J_{02}^*(1.03) = 0.1279$ | $u^*(k)_{02}(1.03) = -0.4200$ |
| $J_{02}^*(1.05) = 0.1328$ | $u^*(k)_{02}(1.05) = -0.4200$ |
| $J_{02}^*(1.07) = 0.1380$ | $u^*(k)_{02}(1.07) = -0.4200$ |
| $J_{02}^*(1.09) = 0.1431$ | $u^*(k)_{02}(1.09) = -0.4400$ |
| $J_{02}^*(0.00) = 0.0000$ | $u^*(k)_{02}(0.00) = 0.0000$  |
| $J_{02}^*(0.02) = 0.0002$ | $u^*(k)_{02}(0.02) = 0.0000$  |
| $J_{02}^*(0.04) = 0.0002$ | $u^*(k)_{02}(0.04) = -0.0200$ |
| $J_{02}^*(0.06) = 0.0005$ | $u^*(k)_{02}(0.06) = -0.0200$ |
| $J_{02}^*(0.08) = 0.0009$ | $u^*(k)_{02}(0.08) = -0.0400$ |
| $J_{02}^*(0.10) = 0.0013$ | $u^*(k)_{02}(0.10) = -0.0400$ |
| $J_{02}^*(0.12) = 0.0020$ | $u^*(k)_{02}(0.12) = -0.0400$ |
| $J_{02}^*(0.14) = 0.0025$ | $u^*(k)_{02}(0.14) = -0.0600$ |
| $J_{02}^*(0.16) = 0.0033$ | $u^*(k)_{02}(0.16) = -0.0600$ |
| $J_{02}^*(0.18) = 0.0041$ | $u^*(k)_{02}(0.18) = -0.0800$ |
| $J_{02}^*(0.20) = 0.0050$ | $u^*(k)_{02}(0.20) = -0.0800$ |
| $J_{02}^*(0.22) = 0.0062$ | $u^*(k)_{02}(0.22) = -0.0800$ |
| $J_{02}^*(0.24) = 0.0072$ | $u^*(k)_{02}(0.24) = -0.1000$ |
| $J_{02}^*(0.26) = 0.0084$ | $u^*(k)_{02}(0.26) = -0.1000$ |
| $J_{02}^*(0.28) = 0.0097$ | $u^*(k)_{02}(0.28) = -0.1200$ |
| $J_{02}^*(0.30) = 0.0111$ | $u^*(k)_{02}(0.30) = -0.1200$ |
| $J_{02}^*(0.32) = 0.0127$ | $u^*(k)_{02}(0.32) = -0.1200$ |
| $J_{02}^*(0.34) = 0.0142$ | $u^*(k)_{02}(0.34) = -0.1400$ |
| $J_{02}^*(0.36) = 0.0159$ | $u^*(k)_{02}(0.36) = -0.1400$ |
| $J_{02}^*(0.38) = 0.0178$ | $u^*(k)_{02}(0.38) = -0.1600$ |
| $J_{02}^*(0.40) = 0.0196$ | $u^*(k)_{02}(0.40) = -0.1600$ |
| $J_{02}^*(0.42) = 0.0217$ | $u^*(k)_{02}(0.42) = -0.1600$ |
| $J_{02}^*(0.44) = 0.0237$ | $u^*(k)_{02}(0.44) = -0.1800$ |
| $J_{02}^*(0.46) = 0.0259$ | $u^*(k)_{02}(0.46) = -0.1800$ |
| $J_{02}^*(0.48) = 0.0282$ | $u^*(k)_{02}(0.48) = -0.2000$ |
| $J_{02}^*(0.50) = 0.0305$ | $u^*(k)_{02}(0.50) = -0.2000$ |
| $J_{02}^*(0.52) = 0.0331$ | $u^*(k)_{02}(0.52) = -0.2000$ |
| $J_{02}^*(0.54) = 0.0355$ | $u^*(k)_{02}(0.54) = -0.2200$ |
| $J_{02}^*(0.56) = 0.0382$ | $u^*(k)_{02}(0.56) = -0.2200$ |
| $J_{02}^*(0.58) = 0.0410$ | $u^*(k)_{02}(0.58) = -0.2400$ |
| $J_{02}^*(0.60) = 0.0438$ | $u^*(k)_{02}(0.60) = -0.2400$ |
| $J_{02}^*(0.62) = 0.0469$ | $u^*(k)_{02}(0.62) = -0.2400$ |
| $J_{02}^*(0.64) = 0.0498$ | $u^*(k)_{02}(0.64) = -0.2600$ |
| $J_{02}^*(0.66) = 0.0530$ | $u^*(k)_{02}(0.66) = -0.2600$ |
| $J_{02}^*(0.68) = 0.0562$ | $u^*(k)_{02}(0.68) = -0.2800$ |
| $J_{02}^*(0.70) = 0.0595$ | $u^*(k)_{02}(0.70) = -0.2800$ |
| $J_{02}^*(0.72) = 0.0630$ | $u^*(k)_{02}(0.72) = -0.2800$ |
| $J_{02}^*(0.74) = 0.0664$ | $u^*(k)_{02}(0.74) = -0.3000$ |
| $J_{02}^*(0.76) = 0.0701$ | $u^*(k)_{02}(0.76) = -0.3000$ |
| $J_{02}^*(0.78) = 0.0738$ | $u^*(k)_{02}(0.78) = -0.3200$ |

|                           |                               |
|---------------------------|-------------------------------|
| $J_{02}^*(0.80) = 0.0776$ | $u^*(k)_{02}(0.80) = -0.3200$ |
| $J_{02}^*(0.82) = 0.0816$ | $u^*(k)_{02}(0.82) = -0.3200$ |
| $J_{02}^*(0.84) = 0.0855$ | $u^*(k)_{02}(0.84) = -0.3400$ |
| $J_{02}^*(0.86) = 0.0896$ | $u^*(k)_{02}(0.86) = -0.3400$ |
| $J_{02}^*(0.88) = 0.0938$ | $u^*(k)_{02}(0.88) = -0.3600$ |
| $J_{02}^*(0.90) = 0.0981$ | $u^*(k)_{02}(0.90) = -0.3600$ |
| $J_{02}^*(0.92) = 0.1026$ | $u^*(k)_{02}(0.92) = -0.3600$ |
| $J_{02}^*(0.94) = 0.1069$ | $u^*(k)_{02}(0.94) = -0.3800$ |
| $J_{02}^*(0.96) = 0.1116$ | $u^*(k)_{02}(0.96) = -0.3800$ |
| $J_{02}^*(0.98) = 0.1163$ | $u^*(k)_{02}(0.98) = -0.4000$ |
| $J_{02}^*(1.00) = 0.1210$ | $u^*(k)_{02}(1.00) = -0.4000$ |
| $J_{02}^*(1.02) = 0.1260$ | $u^*(k)_{02}(1.02) = -0.4000$ |
| $J_{02}^*(1.04) = 0.1308$ | $u^*(k)_{02}(1.04) = -0.4200$ |
| $J_{02}^*(1.06) = 0.1359$ | $u^*(k)_{02}(1.06) = -0.4200$ |
| $J_{02}^*(1.08) = 0.1411$ | $u^*(k)_{02}(1.08) = -0.4400$ |
| $J_{02}^*(1.10) = 0.1463$ | $u^*(k)_{02}(1.10) = -0.4400$ |
| $J_{02}^*(0.02) = 0.0001$ | $u^*(k)_{02}(0.02) = 0.0000$  |
| $J_{02}^*(0.04) = 0.0002$ | $u^*(k)_{02}(0.04) = -0.0200$ |
| $J_{02}^*(0.06) = 0.0004$ | $u^*(k)_{02}(0.06) = -0.0200$ |
| $J_{02}^*(0.08) = 0.0008$ | $u^*(k)_{02}(0.08) = -0.0400$ |
| $J_{02}^*(0.10) = 0.0011$ | $u^*(k)_{02}(0.10) = -0.0400$ |
| $J_{02}^*(0.12) = 0.0017$ | $u^*(k)_{02}(0.12) = -0.0400$ |
| $J_{02}^*(0.14) = 0.0023$ | $u^*(k)_{02}(0.14) = -0.0600$ |
| $J_{02}^*(0.16) = 0.0029$ | $u^*(k)_{02}(0.16) = -0.0600$ |
| $J_{02}^*(0.18) = 0.0039$ | $u^*(k)_{02}(0.18) = -0.0800$ |
| $J_{02}^*(0.20) = 0.0046$ | $u^*(k)_{02}(0.20) = -0.0800$ |
| $J_{02}^*(0.22) = 0.0057$ | $u^*(k)_{02}(0.22) = -0.0800$ |
| $J_{02}^*(0.24) = 0.0067$ | $u^*(k)_{02}(0.24) = -0.1000$ |
| $J_{02}^*(0.26) = 0.0079$ | $u^*(k)_{02}(0.26) = -0.1000$ |
| $J_{02}^*(0.28) = 0.0093$ | $u^*(k)_{02}(0.28) = -0.1200$ |
| $J_{02}^*(0.30) = 0.0105$ | $u^*(k)_{02}(0.30) = -0.1200$ |
| $J_{02}^*(0.32) = 0.0120$ | $u^*(k)_{02}(0.32) = -0.1200$ |
| $J_{02}^*(0.34) = 0.0136$ | $u^*(k)_{02}(0.34) = -0.1400$ |
| $J_{02}^*(0.36) = 0.0152$ | $u^*(k)_{02}(0.36) = -0.1400$ |
| $J_{02}^*(0.38) = 0.0171$ | $u^*(k)_{02}(0.38) = -0.1600$ |
| $J_{02}^*(0.40) = 0.0188$ | $u^*(k)_{02}(0.40) = -0.1600$ |
| $J_{02}^*(0.42) = 0.0208$ | $u^*(k)_{02}(0.42) = -0.1600$ |
| $J_{02}^*(0.44) = 0.0229$ | $u^*(k)_{02}(0.44) = -0.1800$ |
| $J_{02}^*(0.46) = 0.0250$ | $u^*(k)_{02}(0.46) = -0.1800$ |
| $J_{02}^*(0.48) = 0.0273$ | $u^*(k)_{02}(0.48) = -0.2000$ |
| $J_{02}^*(0.50) = 0.0295$ | $u^*(k)_{02}(0.50) = -0.2000$ |
| $J_{02}^*(0.52) = 0.0320$ | $u^*(k)_{02}(0.52) = -0.2000$ |
| $J_{02}^*(0.54) = 0.0345$ | $u^*(k)_{02}(0.54) = -0.2200$ |
| $J_{02}^*(0.56) = 0.0371$ | $u^*(k)_{02}(0.56) = -0.2200$ |
| $J_{02}^*(0.58) = 0.0400$ | $u^*(k)_{02}(0.58) = -0.2400$ |
| $J_{02}^*(0.60) = 0.0426$ | $u^*(k)_{02}(0.60) = -0.2400$ |
| $J_{02}^*(0.62) = 0.0456$ | $u^*(k)_{02}(0.62) = -0.2400$ |
| $J_{02}^*(0.64) = 0.0486$ | $u^*(k)_{02}(0.64) = -0.2600$ |
| $J_{02}^*(0.66) = 0.0516$ | $u^*(k)_{02}(0.66) = -0.2600$ |
| $J_{02}^*(0.68) = 0.0550$ | $u^*(k)_{02}(0.68) = -0.2800$ |
| $J_{02}^*(0.70) = 0.0581$ | $u^*(k)_{02}(0.70) = -0.2800$ |
| $J_{02}^*(0.72) = 0.0616$ | $u^*(k)_{02}(0.72) = -0.2800$ |
| $J_{02}^*(0.74) = 0.0651$ | $u^*(k)_{02}(0.74) = -0.3000$ |
| $J_{02}^*(0.76) = 0.0686$ | $u^*(k)_{02}(0.76) = -0.3000$ |

|                           |                               |
|---------------------------|-------------------------------|
| $J_{02}^*(0.78) = 0.0724$ | $u^*(k)_{02}(0.78) = -0.3200$ |
| $J_{02}^*(0.80) = 0.0760$ | $u^*(k)_{02}(0.80) = -0.3200$ |
| $J_{02}^*(0.82) = 0.0800$ | $u^*(k)_{02}(0.82) = -0.3200$ |
| $J_{02}^*(0.84) = 0.0839$ | $u^*(k)_{02}(0.84) = -0.3400$ |
| $J_{02}^*(0.86) = 0.0879$ | $u^*(k)_{02}(0.86) = -0.3400$ |
| $J_{02}^*(0.88) = 0.0922$ | $u^*(k)_{02}(0.88) = -0.3600$ |
| $J_{02}^*(0.90) = 0.0963$ | $u^*(k)_{02}(0.90) = -0.3600$ |
| $J_{02}^*(0.92) = 0.1007$ | $u^*(k)_{02}(0.92) = -0.3600$ |
| $J_{02}^*(0.94) = 0.1052$ | $u^*(k)_{02}(0.94) = -0.3800$ |
| $J_{02}^*(0.96) = 0.1097$ | $u^*(k)_{02}(0.96) = -0.3800$ |
| $J_{02}^*(0.98) = 0.1144$ | $u^*(k)_{02}(0.98) = -0.4000$ |
| $J_{02}^*(1.00) = 0.1190$ | $u^*(k)_{02}(1.00) = -0.4000$ |
| $J_{02}^*(1.02) = 0.1239$ | $u^*(k)_{02}(1.02) = -0.4000$ |
| $J_{02}^*(1.04) = 0.1288$ | $u^*(k)_{02}(1.04) = -0.4200$ |
| $J_{02}^*(1.06) = 0.1338$ | $u^*(k)_{02}(1.06) = -0.4200$ |
| $J_{02}^*(1.08) = 0.1391$ | $u^*(k)_{02}(1.08) = -0.4400$ |
| $J_{02}^*(1.10) = 0.1441$ | $u^*(k)_{02}(1.10) = -0.4400$ |
| $J_{02}^*(1.12) = 0.1495$ | $u^*(k)_{02}(1.12) = -0.4400$ |
| $J_{02}^*(0.01) = 0.0000$ | $u^*(k)_{02}(0.01) = 0.0000$  |
| $J_{02}^*(0.03) = 0.0002$ | $u^*(k)_{02}(0.03) = -0.0200$ |
| $J_{02}^*(0.05) = 0.0003$ | $u^*(k)_{02}(0.05) = -0.0200$ |
| $J_{02}^*(0.07) = 0.0006$ | $u^*(k)_{02}(0.07) = -0.0200$ |
| $J_{02}^*(0.09) = 0.0010$ | $u^*(k)_{02}(0.09) = -0.0400$ |
| $J_{02}^*(0.11) = 0.0014$ | $u^*(k)_{02}(0.11) = -0.0400$ |
| $J_{02}^*(0.13) = 0.0021$ | $u^*(k)_{02}(0.13) = -0.0600$ |
| $J_{02}^*(0.15) = 0.0026$ | $u^*(k)_{02}(0.15) = -0.0600$ |
| $J_{02}^*(0.17) = 0.0035$ | $u^*(k)_{02}(0.17) = -0.0600$ |
| $J_{02}^*(0.19) = 0.0043$ | $u^*(k)_{02}(0.19) = -0.0800$ |
| $J_{02}^*(0.21) = 0.0052$ | $u^*(k)_{02}(0.21) = -0.0800$ |
| $J_{02}^*(0.23) = 0.0064$ | $u^*(k)_{02}(0.23) = -0.1000$ |
| $J_{02}^*(0.25) = 0.0074$ | $u^*(k)_{02}(0.25) = -0.1000$ |
| $J_{02}^*(0.27) = 0.0087$ | $u^*(k)_{02}(0.27) = -0.1000$ |
| $J_{02}^*(0.29) = 0.0100$ | $u^*(k)_{02}(0.29) = -0.1200$ |
| $J_{02}^*(0.31) = 0.0114$ | $u^*(k)_{02}(0.31) = -0.1200$ |
| $J_{02}^*(0.33) = 0.0130$ | $u^*(k)_{02}(0.33) = -0.1400$ |
| $J_{02}^*(0.35) = 0.0145$ | $u^*(k)_{02}(0.35) = -0.1400$ |
| $J_{02}^*(0.37) = 0.0163$ | $u^*(k)_{02}(0.37) = -0.1400$ |
| $J_{02}^*(0.39) = 0.0181$ | $u^*(k)_{02}(0.39) = -0.1600$ |
| $J_{02}^*(0.41) = 0.0200$ | $u^*(k)_{02}(0.41) = -0.1600$ |
| $J_{02}^*(0.43) = 0.0221$ | $u^*(k)_{02}(0.43) = -0.1800$ |
| $J_{02}^*(0.45) = 0.0241$ | $u^*(k)_{02}(0.45) = -0.1800$ |
| $J_{02}^*(0.47) = 0.0264$ | $u^*(k)_{02}(0.47) = -0.1800$ |
| $J_{02}^*(0.49) = 0.0286$ | $u^*(k)_{02}(0.49) = -0.2000$ |
| $J_{02}^*(0.51) = 0.0310$ | $u^*(k)_{02}(0.51) = -0.2000$ |
| $J_{02}^*(0.53) = 0.0336$ | $u^*(k)_{02}(0.53) = -0.2200$ |
| $J_{02}^*(0.55) = 0.0360$ | $u^*(k)_{02}(0.55) = -0.2200$ |
| $J_{02}^*(0.57) = 0.0388$ | $u^*(k)_{02}(0.57) = -0.2200$ |
| $J_{02}^*(0.59) = 0.0415$ | $u^*(k)_{02}(0.59) = -0.2400$ |
| $J_{02}^*(0.61) = 0.0444$ | $u^*(k)_{02}(0.61) = -0.2400$ |
| $J_{02}^*(0.63) = 0.0474$ | $u^*(k)_{02}(0.63) = -0.2600$ |
| $J_{02}^*(0.65) = 0.0504$ | $u^*(k)_{02}(0.65) = -0.2600$ |
| $J_{02}^*(0.67) = 0.0536$ | $u^*(k)_{02}(0.67) = -0.2600$ |
| $J_{02}^*(0.69) = 0.0568$ | $u^*(k)_{02}(0.69) = -0.2800$ |
| $J_{02}^*(0.71) = 0.0602$ | $u^*(k)_{02}(0.71) = -0.2800$ |



|                           |                               |
|---------------------------|-------------------------------|
| $J_{02}^*(0.73) = 0.0637$ | $u^*(k)_{02}(0.73) = -0.3000$ |
| $J_{02}^*(0.75) = 0.0671$ | $u^*(k)_{02}(0.75) = -0.3000$ |
| $J_{02}^*(0.77) = 0.0709$ | $u^*(k)_{02}(0.77) = -0.3000$ |
| $J_{02}^*(0.79) = 0.0745$ | $u^*(k)_{02}(0.79) = -0.3200$ |
| $J_{02}^*(0.81) = 0.0784$ | $u^*(k)_{02}(0.81) = -0.3200$ |
| $J_{02}^*(0.83) = 0.0824$ | $u^*(k)_{02}(0.83) = -0.3400$ |
| $J_{02}^*(0.85) = 0.0863$ | $u^*(k)_{02}(0.85) = -0.3400$ |
| $J_{02}^*(0.87) = 0.0905$ | $u^*(k)_{02}(0.87) = -0.3400$ |
| $J_{02}^*(0.89) = 0.0947$ | $u^*(k)_{02}(0.89) = -0.3600$ |
| $J_{02}^*(0.91) = 0.0990$ | $u^*(k)_{02}(0.91) = -0.3600$ |
| $J_{02}^*(0.93) = 0.1035$ | $u^*(k)_{02}(0.93) = -0.3800$ |
| $J_{02}^*(0.95) = 0.1078$ | $u^*(k)_{02}(0.95) = -0.3800$ |
| $J_{02}^*(0.97) = 0.1125$ | $u^*(k)_{02}(0.97) = -0.3800$ |
| $J_{02}^*(0.99) = 0.1172$ | $u^*(k)_{02}(0.99) = -0.4000$ |
| $J_{02}^*(1.01) = 0.1219$ | $u^*(k)_{02}(1.01) = -0.4000$ |
| $J_{02}^*(1.03) = 0.1269$ | $u^*(k)_{02}(1.03) = -0.4200$ |
| $J_{02}^*(1.05) = 0.1318$ | $u^*(k)_{02}(1.05) = -0.4200$ |
| $J_{02}^*(1.07) = 0.1370$ | $u^*(k)_{02}(1.07) = -0.4200$ |
| $J_{02}^*(1.09) = 0.1421$ | $u^*(k)_{02}(1.09) = -0.4400$ |
| $J_{02}^*(1.11) = 0.1473$ | $u^*(k)_{02}(1.11) = -0.4400$ |
| $J_{02}^*(1.13) = 0.1528$ | $u^*(k)_{02}(1.13) = -0.4600$ |
| $J_{02}^*(1.10) = 0.1452$ | $u^*(k)_{02}(1.10) = -0.4400$ |
| $J_{02}^*(1.12) = 0.1506$ | $u^*(k)_{02}(1.12) = -0.4400$ |
| $J_{02}^*(1.14) = 0.1560$ | $u^*(k)_{02}(1.14) = -0.4600$ |
| $J_{02}^*(1.11) = 0.1484$ | $u^*(k)_{02}(1.11) = -0.4400$ |
| $J_{02}^*(1.13) = 0.1538$ | $u^*(k)_{02}(1.13) = -0.4600$ |
| $J_{02}^*(1.15) = 0.1593$ | $u^*(k)_{02}(1.15) = -0.4600$ |
| $J_{02}^*(1.12) = 0.1517$ | $u^*(k)_{02}(1.12) = -0.4400$ |
| $J_{02}^*(1.14) = 0.1571$ | $u^*(k)_{02}(1.14) = -0.4600$ |
| $J_{02}^*(1.16) = 0.1626$ | $u^*(k)_{02}(1.16) = -0.4600$ |
| $J_{02}^*(1.14) = 0.1549$ | $u^*(k)_{02}(1.14) = -0.4600$ |
| $J_{02}^*(1.16) = 0.1604$ | $u^*(k)_{02}(1.16) = -0.4600$ |
| $J_{02}^*(1.18) = 0.1661$ | $u^*(k)_{02}(1.18) = -0.4800$ |
| $J_{02}^*(1.15) = 0.1581$ | $u^*(k)_{02}(1.15) = -0.4600$ |
| $J_{02}^*(1.17) = 0.1638$ | $u^*(k)_{02}(1.17) = -0.4600$ |
| $J_{02}^*(1.19) = 0.1694$ | $u^*(k)_{02}(1.19) = -0.4800$ |
| $J_{02}^*(1.16) = 0.1615$ | $u^*(k)_{02}(1.16) = -0.4600$ |
| $J_{02}^*(1.18) = 0.1672$ | $u^*(k)_{02}(1.18) = -0.4800$ |
| $J_{02}^*(1.20) = 0.1728$ | $u^*(k)_{02}(1.20) = -0.4800$ |
| $J_{02}^*(1.17) = 0.1649$ | $u^*(k)_{02}(1.17) = -0.4600$ |
| $J_{02}^*(1.19) = 0.1705$ | $u^*(k)_{02}(1.19) = -0.4800$ |
| $J_{02}^*(1.21) = 0.1763$ | $u^*(k)_{02}(1.21) = -0.4800$ |
| $J_{02}^*(1.18) = 0.1683$ | $u^*(k)_{02}(1.18) = -0.4800$ |
| $J_{02}^*(1.20) = 0.1740$ | $u^*(k)_{02}(1.20) = -0.4800$ |
| $J_{02}^*(1.22) = 0.1799$ | $u^*(k)_{02}(1.22) = -0.4800$ |
| $J_{02}^*(1.20) = 0.1717$ | $u^*(k)_{02}(1.20) = -0.4800$ |
| $J_{02}^*(1.22) = 0.1775$ | $u^*(k)_{02}(1.22) = -0.4800$ |
| $J_{02}^*(1.24) = 0.1834$ | $u^*(k)_{02}(1.24) = -0.5000$ |
| $J_{02}^*(1.21) = 0.1751$ | $u^*(k)_{02}(1.21) = -0.4800$ |
| $J_{02}^*(1.23) = 0.1811$ | $u^*(k)_{02}(1.23) = -0.5000$ |
| $J_{02}^*(1.25) = 0.1869$ | $u^*(k)_{02}(1.25) = -0.5000$ |
| $J_{02}^*(1.22) = 0.1787$ | $u^*(k)_{02}(1.22) = -0.4800$ |
| $J_{02}^*(1.24) = 0.1845$ | $u^*(k)_{02}(1.24) = -0.5000$ |
| $J_{02}^*(1.26) = 0.1905$ | $u^*(k)_{02}(1.26) = -0.5000$ |

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|---------------------------|-------------------------------|
| $J_{02}^*(1.23) = 0.1822$ | $u^*(k)_{02}(1.23) = -0.5000$ |
| $J_{02}^*(1.25) = 0.1881$ | $u^*(k)_{02}(1.25) = -0.5000$ |
| $J_{02}^*(1.27) = 0.1943$ | $u^*(k)_{02}(1.27) = -0.5000$ |
| $J_{02}^*(1.24) = 0.1857$ | $u^*(k)_{02}(1.24) = -0.5000$ |
| $J_{02}^*(1.26) = 0.1918$ | $u^*(k)_{02}(1.26) = -0.5000$ |
| $J_{02}^*(1.28) = 0.1979$ | $u^*(k)_{02}(1.28) = -0.5200$ |
| $J_{02}^*(1.26) = 0.1893$ | $u^*(k)_{02}(1.26) = -0.5000$ |
| $J_{02}^*(1.28) = 0.1955$ | $u^*(k)_{02}(1.28) = -0.5200$ |
| $J_{02}^*(1.30) = 0.2016$ | $u^*(k)_{02}(1.30) = -0.5200$ |
| $J_{02}^*(1.27) = 0.1930$ | $u^*(k)_{02}(1.27) = -0.5000$ |
| $J_{02}^*(1.29) = 0.1991$ | $u^*(k)_{02}(1.29) = -0.5200$ |
| $J_{02}^*(1.31) = 0.2053$ | $u^*(k)_{02}(1.31) = -0.5200$ |
| $J_{02}^*(1.28) = 0.1967$ | $u^*(k)_{02}(1.28) = -0.5200$ |
| $J_{02}^*(1.30) = 0.2028$ | $u^*(k)_{02}(1.30) = -0.5200$ |
| $J_{02}^*(1.32) = 0.2092$ | $u^*(k)_{02}(1.32) = -0.5200$ |
| $J_{02}^*(1.29) = 0.2003$ | $u^*(k)_{02}(1.29) = -0.5200$ |
| $J_{02}^*(1.31) = 0.2066$ | $u^*(k)_{02}(1.31) = -0.5200$ |
| $J_{02}^*(1.33) = 0.2130$ | $u^*(k)_{02}(1.33) = -0.5400$ |
| $J_{02}^*(1.30) = 0.2041$ | $u^*(k)_{02}(1.30) = -0.5200$ |
| $J_{02}^*(1.32) = 0.2105$ | $u^*(k)_{02}(1.32) = -0.5200$ |
| $J_{02}^*(1.34) = 0.2168$ | $u^*(k)_{02}(1.34) = -0.5400$ |
| $J_{02}^*(1.32) = 0.2079$ | $u^*(k)_{02}(1.32) = -0.5200$ |
| $J_{02}^*(1.34) = 0.2142$ | $u^*(k)_{02}(1.34) = -0.5400$ |
| $J_{02}^*(1.36) = 0.2207$ | $u^*(k)_{02}(1.36) = -0.5400$ |
| $J_{02}^*(1.33) = 0.2117$ | $u^*(k)_{02}(1.33) = -0.5400$ |
| $J_{02}^*(1.35) = 0.2181$ | $u^*(k)_{02}(1.35) = -0.5400$ |
| $J_{02}^*(1.37) = 0.2246$ | $u^*(k)_{02}(1.37) = -0.5400$ |
| $J_{02}^*(1.34) = 0.2155$ | $u^*(k)_{02}(1.34) = -0.5400$ |
| $J_{02}^*(1.36) = 0.2220$ | $u^*(k)_{02}(1.36) = -0.5400$ |
| $J_{02}^*(1.38) = 0.2286$ | $u^*(k)_{02}(1.38) = -0.5600$ |
| $J_{02}^*(1.35) = 0.2193$ | $u^*(k)_{02}(1.35) = -0.5400$ |
| $J_{02}^*(1.37) = 0.2260$ | $u^*(k)_{02}(1.37) = -0.5400$ |
| $J_{02}^*(1.39) = 0.2325$ | $u^*(k)_{02}(1.39) = -0.5600$ |
| $J_{02}^*(1.36) = 0.2233$ | $u^*(k)_{02}(1.36) = -0.5400$ |
| $J_{02}^*(1.38) = 0.2299$ | $u^*(k)_{02}(1.38) = -0.5600$ |
| $J_{02}^*(1.40) = 0.2365$ | $u^*(k)_{02}(1.40) = -0.5600$ |
| $J_{02}^*(1.38) = 0.2273$ | $u^*(k)_{02}(1.38) = -0.5600$ |
| $J_{02}^*(1.40) = 0.2339$ | $u^*(k)_{02}(1.40) = -0.5600$ |
| $J_{02}^*(1.42) = 0.2407$ | $u^*(k)_{02}(1.42) = -0.5600$ |
| $J_{02}^*(1.39) = 0.2312$ | $u^*(k)_{02}(1.39) = -0.5600$ |
| $J_{02}^*(1.41) = 0.2379$ | $u^*(k)_{02}(1.41) = -0.5600$ |
| $J_{02}^*(1.43) = 0.2448$ | $u^*(k)_{02}(1.43) = -0.5800$ |
| $J_{02}^*(1.40) = 0.2352$ | $u^*(k)_{02}(1.40) = -0.5600$ |
| $J_{02}^*(1.42) = 0.2421$ | $u^*(k)_{02}(1.42) = -0.5600$ |
| $J_{02}^*(1.44) = 0.2489$ | $u^*(k)_{02}(1.44) = -0.5800$ |
| $J_{02}^*(1.41) = 0.2393$ | $u^*(k)_{02}(1.41) = -0.5600$ |
| $J_{02}^*(1.43) = 0.2462$ | $u^*(k)_{02}(1.43) = -0.5800$ |
| $J_{02}^*(1.45) = 0.2530$ | $u^*(k)_{02}(1.45) = -0.5800$ |
| $J_{02}^*(1.42) = 0.2435$ | $u^*(k)_{02}(1.42) = -0.5600$ |
| $J_{02}^*(1.44) = 0.2502$ | $u^*(k)_{02}(1.44) = -0.5800$ |
| $J_{02}^*(1.46) = 0.2572$ | $u^*(k)_{02}(1.46) = -0.5800$ |
| $J_{02}^*(1.44) = 0.2475$ | $u^*(k)_{02}(1.44) = -0.5800$ |
| $J_{02}^*(1.46) = 0.2544$ | $u^*(k)_{02}(1.46) = -0.5800$ |
| $J_{02}^*(1.48) = 0.2616$ | $u^*(k)_{02}(1.48) = -0.6000$ |

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|---------------------------|-------------------------------|
| $J_{02}^*(1.45) = 0.2516$ | $u^*(k)_{02}(1.45) = -0.5800$ |
| $J_{02}^*(1.47) = 0.2587$ | $u^*(k)_{02}(1.47) = -0.5800$ |
| $J_{02}^*(1.49) = 0.2657$ | $u^*(k)_{02}(1.49) = -0.6000$ |
| $J_{02}^*(1.46) = 0.2558$ | $u^*(k)_{02}(1.46) = -0.5800$ |
| $J_{02}^*(1.48) = 0.2629$ | $u^*(k)_{02}(1.48) = -0.6000$ |
| $J_{02}^*(1.50) = 0.2700$ | $u^*(k)_{02}(1.50) = -0.6000$ |
| $J_{02}^*(1.47) = 0.2601$ | $u^*(k)_{02}(1.47) = -0.5800$ |
| $J_{02}^*(1.49) = 0.2671$ | $u^*(k)_{02}(1.49) = -0.6000$ |
| $J_{02}^*(1.48) = 0.2643$ | $u^*(k)_{02}(1.48) = -0.6000$ |
| $J_{02}^*(1.50) = 0.2686$ | $u^*(k)_{02}(1.50) = -0.6000$ |
| $J_{12}^*(0.00) = 0.0000$ | $u^*(k)_{13}(0.00) = 0.0000$  |
| $J_{12}^*(0.02) = 0.0001$ | $u^*(k)_{13}(0.02) = 0.0000$  |
| $J_{12}^*(0.04) = 0.0002$ | $u^*(k)_{13}(0.04) = -0.0200$ |
| $J_{12}^*(0.06) = 0.0002$ | $u^*(k)_{13}(0.06) = 0.0000$  |
| $J_{12}^*(0.08) = 0.0003$ | $u^*(k)_{13}(0.08) = 0.0000$  |
| $J_{12}^*(0.10) = 0.0004$ | $u^*(k)_{13}(0.10) = -0.0200$ |
| $J_{12}^*(0.12) = 0.0005$ | $u^*(k)_{13}(0.12) = -0.0200$ |
| $J_{12}^*(0.14) = 0.0007$ | $u^*(k)_{13}(0.14) = -0.0200$ |
| $J_{12}^*(0.16) = 0.0010$ | $u^*(k)_{13}(0.16) = -0.0200$ |
| $J_{12}^*(0.18) = 0.0012$ | $u^*(k)_{13}(0.18) = -0.0200$ |
| $J_{12}^*(0.20) = 0.0014$ | $u^*(k)_{13}(0.20) = -0.0200$ |
| $J_{12}^*(0.22) = 0.0017$ | $u^*(k)_{13}(0.22) = -0.0200$ |
| $J_{12}^*(0.24) = 0.0021$ | $u^*(k)_{13}(0.24) = -0.0400$ |
| $J_{12}^*(0.26) = 0.0025$ | $u^*(k)_{13}(0.26) = -0.0200$ |
| $J_{12}^*(0.28) = 0.0028$ | $u^*(k)_{13}(0.28) = -0.0200$ |
| $J_{12}^*(0.30) = 0.0032$ | $u^*(k)_{13}(0.30) = -0.0400$ |
| $J_{12}^*(0.32) = 0.0036$ | $u^*(k)_{13}(0.32) = -0.0400$ |
| $J_{12}^*(0.34) = 0.0041$ | $u^*(k)_{13}(0.34) = -0.0400$ |
| $J_{12}^*(0.36) = 0.0047$ | $u^*(k)_{13}(0.36) = -0.0400$ |
| $J_{12}^*(0.38) = 0.0051$ | $u^*(k)_{13}(0.38) = -0.0400$ |
| $J_{12}^*(0.40) = 0.0056$ | $u^*(k)_{13}(0.40) = -0.0400$ |
| $J_{12}^*(0.42) = 0.0062$ | $u^*(k)_{13}(0.42) = -0.0400$ |
| $J_{12}^*(0.44) = 0.0068$ | $u^*(k)_{13}(0.44) = -0.0600$ |
| $J_{12}^*(0.46) = 0.0075$ | $u^*(k)_{13}(0.46) = -0.0600$ |
| $J_{12}^*(0.48) = 0.0082$ | $u^*(k)_{13}(0.48) = -0.0600$ |
| $J_{12}^*(0.50) = 0.0087$ | $u^*(k)_{13}(0.50) = -0.0600$ |
| $J_{12}^*(0.52) = 0.0094$ | $u^*(k)_{13}(0.52) = -0.0600$ |
| $J_{12}^*(0.54) = 0.0102$ | $u^*(k)_{13}(0.54) = -0.0600$ |
| $J_{12}^*(0.56) = 0.0111$ | $u^*(k)_{13}(0.56) = -0.0800$ |
| $J_{12}^*(0.58) = 0.0118$ | $u^*(k)_{13}(0.58) = -0.0600$ |
| $J_{12}^*(0.60) = 0.0126$ | $u^*(k)_{13}(0.60) = -0.0600$ |
| $J_{12}^*(0.62) = 0.0134$ | $u^*(k)_{13}(0.62) = -0.0800$ |
| $J_{12}^*(0.64) = 0.0143$ | $u^*(k)_{13}(0.64) = -0.0800$ |
| $J_{12}^*(0.66) = 0.0152$ | $u^*(k)_{13}(0.66) = -0.0800$ |
| $J_{12}^*(0.68) = 0.0162$ | $u^*(k)_{13}(0.68) = -0.0800$ |
| $J_{12}^*(0.70) = 0.0171$ | $u^*(k)_{13}(0.70) = -0.0800$ |
| $J_{12}^*(0.72) = 0.0181$ | $u^*(k)_{13}(0.72) = -0.0800$ |
| $J_{12}^*(0.74) = 0.0191$ | $u^*(k)_{13}(0.74) = -0.0800$ |
| $J_{12}^*(0.76) = 0.0202$ | $u^*(k)_{13}(0.76) = -0.1000$ |
| $J_{12}^*(0.78) = 0.0213$ | $u^*(k)_{13}(0.78) = -0.0800$ |
| $J_{12}^*(0.80) = 0.0224$ | $u^*(k)_{13}(0.80) = -0.0800$ |
| $J_{12}^*(0.82) = 0.0235$ | $u^*(k)_{13}(0.82) = -0.1000$ |
| $J_{12}^*(0.84) = 0.0246$ | $u^*(k)_{13}(0.84) = -0.1000$ |
| $J_{12}^*(0.86) = 0.0258$ | $u^*(k)_{13}(0.86) = -0.1000$ |

|                           |                               |
|---------------------------|-------------------------------|
| $J_{12}^*(0.88) = 0.0271$ | $u^*(k)_{13}(0.88) = -0.1000$ |
| $J_{12}^*(0.90) = 0.0283$ | $u^*(k)_{13}(0.90) = -0.1000$ |
| $J_{12}^*(0.92) = 0.0295$ | $u^*(k)_{13}(0.92) = -0.1000$ |
| $J_{12}^*(0.94) = 0.0309$ | $u^*(k)_{13}(0.94) = -0.1200$ |
| $J_{12}^*(0.96) = 0.0322$ | $u^*(k)_{13}(0.96) = -0.1200$ |
| $J_{12}^*(0.98) = 0.0336$ | $u^*(k)_{13}(0.98) = -0.1200$ |
| $J_{12}^*(1.00) = 0.0349$ | $u^*(k)_{13}(1.00) = -0.1200$ |
| $J_{12}^*(1.02) = 0.0363$ | $u^*(k)_{13}(1.02) = -0.1200$ |
| $J_{12}^*(1.04) = 0.0377$ | $u^*(k)_{13}(1.04) = -0.1200$ |
| $J_{12}^*(1.06) = 0.0392$ | $u^*(k)_{13}(1.06) = -0.1200$ |
| $J_{12}^*(1.08) = 0.0408$ | $u^*(k)_{13}(1.08) = -0.1200$ |
| $J_{12}^*(1.10) = 0.0422$ | $u^*(k)_{13}(1.10) = -0.1200$ |
| $J_{12}^*(1.12) = 0.0438$ | $u^*(k)_{13}(1.12) = -0.1200$ |
| $J_{12}^*(1.14) = 0.0453$ | $u^*(k)_{13}(1.14) = -0.1400$ |
| $J_{12}^*(1.16) = 0.0469$ | $u^*(k)_{13}(1.16) = -0.1400$ |
| $J_{12}^*(1.18) = 0.0486$ | $u^*(k)_{13}(1.18) = -0.1400$ |
| $J_{12}^*(1.20) = 0.0503$ | $u^*(k)_{13}(1.20) = -0.1400$ |
| $J_{12}^*(1.22) = 0.0519$ | $u^*(k)_{13}(1.22) = -0.1400$ |
| $J_{12}^*(1.24) = 0.0536$ | $u^*(k)_{13}(1.24) = -0.1400$ |
| $J_{12}^*(1.26) = 0.0554$ | $u^*(k)_{13}(1.26) = -0.1400$ |
| $J_{12}^*(1.28) = 0.0572$ | $u^*(k)_{13}(1.28) = -0.1600$ |
| $J_{12}^*(1.30) = 0.0590$ | $u^*(k)_{13}(1.30) = -0.1400$ |
| $J_{12}^*(1.32) = 0.0608$ | $u^*(k)_{13}(1.32) = -0.1600$ |
| $J_{12}^*(1.34) = 0.0626$ | $u^*(k)_{13}(1.34) = -0.1600$ |
| $J_{12}^*(1.36) = 0.0644$ | $u^*(k)_{13}(1.36) = -0.1600$ |
| $J_{12}^*(1.38) = 0.0664$ | $u^*(k)_{13}(1.38) = -0.1600$ |
| $J_{12}^*(1.40) = 0.0684$ | $u^*(k)_{13}(1.40) = -0.1600$ |
| $J_{12}^*(1.42) = 0.0703$ | $u^*(k)_{13}(1.42) = -0.1600$ |
| $J_{12}^*(1.44) = 0.0723$ | $u^*(k)_{13}(1.44) = -0.1600$ |
| $J_{12}^*(1.46) = 0.0743$ | $u^*(k)_{13}(1.46) = -0.1800$ |
| $J_{12}^*(1.48) = 0.0764$ | $u^*(k)_{13}(1.48) = -0.1800$ |
| $J_{12}^*(1.50) = 0.0785$ | $u^*(k)_{13}(1.50) = -0.1800$ |