$\qquad$ CM: $\qquad$ Section: $\qquad$ Grade: $\qquad$ of 10

1. In the table below, read the code in the first column. Then write in the second column what it prints when it runs.
2. In the table below, read the code in the third column. Then write in the fourth column what it prints when it runs.

| For problem 1 |  | For problem 2 |  |
| :---: | :---: | :---: | :---: |
| ```for j in range(4): for k in range(2): print(j, k)``` | Output: | ```for j in range(4): for k in range(j): print(j, k)``` | Output: |

3. In problems where we are trying to write code to print patterns (like triangular or rectangular in shape) to the console, we try to "separate concerns" into 3 parts and address them one at a time. Number the first concern we address with a 1 , second with a 2 , etc. Leave blank the one that isn't a concern.
$\qquad$ Get the values that are printed correct
$\qquad$ Get the number of rows correct
$\qquad$ Get the return statement correct
$\qquad$ Get the number of columns correct
4. You learned in a video that the code in the first column below prints a triangle of stars with $\boldsymbol{n}$ rows and $\boldsymbol{n}$ columns, as shown in the picture in the second column for $n=4$. For each of the remaining three columns, indicate what expression involving $j$ and/or $k$ should be in the print statement instead of the * to produce the output for that column. Write your answer inside the column, below the output.

| for $j$ in range $(n):$ | $*$ | 1 | 1 | 0 |
| :---: | :--- | :--- | :--- | :--- |
| for k in range $(\mathrm{j}+1):$ | $* *$ | 12 | 22 | 12 |
| print ("*", end=" $)$ | $* * *$ | 123 | 333 | 234 |
| print () |  | 1234 | 4444 | 3456 |

