## Day 5--Concept Questions

Name: $\qquad$ CM: $\qquad$

1. Consider the following piece of code:

1 for $n=1: 2: 6$
$2 \operatorname{var}=\mathrm{n}^{\wedge} 2$;
3 end
The table below has a column for how many steps this program will take to run. Each step corresponds to a particular line number in the program. For each step, write out the variables that exist after that line executes and what the values of those variables are.

| Step | Line \# | Variables |
| :---: | :---: | :--- |
| 1 | 1 |  |
| 2 | 2 |  |
| 3 | 3 |  |
| 4 | 1 |  |
| 5 | 2 |  |
| 6 | 3 |  |
| 7 | 1 |  |
| 8 | 3 |  |
| 9 |  |  |

(over)
2. Consider the following piece of code:

```
for x = 2.0:0.2:0.0
    fprintf('x = %4.2f x_sq = %6.2f.\n', x, x^2);
end
```

What is the third line of the output upon executing the above code? Explain.
3. Consider the following piece of code:

```
for \(x=2.0:-0.2: 0.0\)
    fprintf('x = \%4.2f x_sq = \%6.2f. \(\mathrm{n}^{\prime}\), \(\left.\mathrm{x}, \mathrm{x} \wedge 2\right)\);
end
```

What is the third line of the output upon executing the above code? Explain.

