| Computer Science 1 | Exercises 11.05-09 | Date: |
|---|---|---|
| Name: | | Period: |

**In questions 1 – 4, print the output of the provided program segments.**

1. 
```
print(3 + 3 == 6)
```

2. 
```
print(3 + 3 == 9)
```

3. 
```
a = 10
b = 20
print(a > b)
print(a < b)
```

4. 
```
x = 10
y = 20
z = 30
b = x + y == z
print(b)
```

5. Compare programs **Boolean03.py**, **Boolean04.py** and **Boolean05.py**.
All 3 programs do the same thing. The latter 2 programs use a Boolean variable.
What benefit does this have?

6. Rewrite this program segment with a single program statement.

```
if a > b:
   c = true
else:
   c = false
```

**Questions 7 – 9 refer to the table below:**

| Name | Years of Education | Years of Work Experience |
|---|---|---|
| Tom | 17 | 1 |
| Sue | 14 | 6 |
| Harold | 11 | 4 |
| Amy | 20 | 8 |

7. Which of the people in the chart would be hired by the "Nice Boss" from **CompoundCondition01.py**?

8. Which of the people in the chart would be hired by the "Picky Boss" from **CompoundCondition02.py**?

9. Which of the people in the chart would be hired by the "Crazy Boss" from **CompoundCondition04.py**?

10. Anyone who is old enough to vote (meaning they are at least 18) is also old enough for Jury Duty.
People who are 75 or above are not required to serve Jury Duty.
Write the **if** statement that will determine if someone is the proper age to be required to serve jury duty.
(Hint: Look at program **Ranges01.py**.)

## Questions 11 – 14 refer to program **InputProtection04.py**.

11. Explain how this program is an example of a *nested control structure?*

12. How does this program prevent a user from entering invalid SAT scores?

13. How does this program prevent a user from entering invalid genders?

14. Compare this program to **InputProtection03.py**.
List 2 improvements that were made with **InputProtection04.py**.

15. Explain the logic errors in program **LogicError01.py**.

16. Explain the logic errors in program **LogicError02.py**.

17. Explain the logic errors in program **LogicError03.py**.