

Prob 1

p1.equals(p2)

This will call the method under PersonWithJob because p1 is instance of PersonWithJob. However, the parameter p2 is instance of Person. Person is the parent of the PersonWithJob. Therefore, p2 is still instance of Person although p2 is passed as Object. That's why, it returns false when checking aPersonWithJob **instanceof** PersonWithJob.

p2.equals(p1)

This will call the method under Person because p2 is instance of Person. However, the parameter p1 can be instance of both Person and PersonWithJob although p1 is passed as Object. PersonWithJob is inherits from Person. (for example every classes are inherits from Object by default, so they are still instance of Object)

That's why it skipped the condition, !(aPerson **instanceof** Person)) because it is not true. And proceed to the remaining code.