heading for equals in Object is:

```java
public boolean equals(Object x) {
    //

    // note: to compare primitive types for equality, use ==

    x == y
```

to compare reference types, always equals()
\( a . \text{equals}(b) \)

default behavior: true iff

\( a \text{ same as } a == b \).
General template for defn at equals(): (in class Blah) say

public boolean equals(Object x) {

    Blah B;
    boolean eq = false;
    if (x instanceof Blah) {
        B = (Blah) x;
        // compare this to B,
        // field by field, assign
        // eq accordingly.
    }
    return eq;
}
Data hiding:
a private member of a class (variable or method) can only be accessed from within that class.

why do we have this?

a new data type is a black box, the user (programmer) need not be concerned with internal details, reducing complexity.
- manipulation procedure:
  alter internal state of an object

- access functions:
  return information about internal state.