

Exercise 4

1. State if the following expression is a valid boolean statement.

- (a) `sales_price - cost_price = profit`
- (b) `mark >= 100`
- (c) `dollar != 500`
- (d) `a*a + b*b != c*c`
- (e) `x + y < z`
- (f) `alpha == "k"` [alpha is declared of type char]
- (g) `choice = 'Y'`
- (h) `x = ++x`
- (i) `"Vladimir" > "Lopez"`
- (j) `"John".equals("Jack")`
- (k) `"Ali".compareTo("Betsy") > 0`

2. Based on the declared values of a, b and c, state if each boolean expression is true or false.

```
int a = 10, b = 20, c = 40;  
String x = "DotNet", y = "DotNet";
```

- (a) `b > 2 * a` _____
- (b) `c*c == a * a + b * b` _____
- (c) `b % 4 == 0` _____
- (d) `c / b % 2 != 1` _____
- (e) `a / b < 0` _____
- (f) `b / c <= a / b` _____
- (g) `x.equals(y)` _____
- (h) `x.compareTo(y) == 0` _____