

Understanding Conditions



- ❖ x and y are greater than z
 - Expression?
 - When true?
- ❖ x is equal to 1.0 or 3.0
 - Expression?
 - When true?
- ❖ x is the range z to y inclusive
 - Expression?
 - When true?
- ❖ x is outside the range z to y
 - Expression?
 - When true?



Boolean variables

- ❖ Boolean variables have value true or false
- ❖ Can assign them:

```
bool same;
```

```
same = false;
```

```
same = (x == y);
```

```
cout << "The value of same is" << same;
```

If statements



- ❖ Single alternative:

if (condition)	or	if (condition)
statement;		{
next statement;		statements;
		}
		next statement;

- ❖ If condition is true, statement(s) following if execute
- ❖ if condition is false, statement(s) following if are skipped.



Examples

```
if (x >= 0)
    cout << "x is positive" << endl;
```

```
if (x < 0)
    x = -x;
```

```
if ((x == 0) && (y == 0))
{
    x = 1;
    y = 1;
}
```

Two Alternative



```
if (condition)
  statementT;
else
  statementF;
```

```
if (condition)
{
    statementsT;
}
else
{
    statementsF;
}
```