



Casting (המרה)

- Sometimes it is desirable for a variable of one type to be considered as belonging to another in an operation
- We say the variable is *cast* to the new type
- Syntax: *(type)operation/variable*



Example – find what's wrong

```
int a = 10;
```

```
int b = 20;
```

```
System.out.println("average=" + (a+b) * (1/2));
```



Alternatives

```
int a = 10;
```

```
int b = 20;
```

```
System.out.println("average = " + (a+b) * ((double)1/2));
```

```
System.out.println("average = " + (a+b) * (1.0/2));
```

```
// will the following work?
```

```
System.out.println("average = " + (a+b) * (double) (1/2));
```



Implicit Cast

- Automatic conversion between data types
- Occurs when data types can not be compared as is

```
int x, y;
```

```
double d;
```

```
x = 3; y = 5;
```

```
d = x + y; // d gets 8.0000
```



Implicit Cast (Cont.)

`int a = 4.5; // implicit cast from double (4.5) to int (4),
compilation error`

`double x = 4; // implicit cast from int to double, "int is a
double" relation hold`