

p. 192 #3

```
public static int max (int x, int y)
```

```
{
  ①
```

```
  if (x > y)
```

```
    return x;
```

```
  return y;
```

```
  ② return
```

```
    Math.max(x, y);
```

```
  ③ return x > y ? x : y;
```

```
}
```

#4

```
public double totalWages
  ( double hours, double rate)
```

```
{
```

```
  double wages;
```

```
  if (hours > 40)
```

```
  {
```

```
    double x = hours - 40;
```

```
    double y = 40 * rate;
```

```
    wages = x * rate * 1.5 + y;
```

```
  }
```

```
  else
```

```
    wages = hours * rate;
```

```
  return wages;
```

```
}
```

```
return hours > 40 ?  
    (hours - 40) * rate * 1.5 + 40 * rate :  
    hours * rate  
    ;
```

how totalWages() method might be used

```
double hours = e.getHours();  
double rate = e.getBaseRate();  
  
double wages = totalWages  
    (hours, rate);
```

boolean

!(hours > 40)
 "not hours > 40"
 T if hours ≤ 40
 F if hours > 40

if (hours ≤ 40) ...
 Same as
 if (! (hours > 40)) ...

De Morgan's Laws

$$!(p \ \&\& \ q) \iff !p \ \|\ \!q$$

$$!(p \ \|\ \ q) \iff !p \ \&\& \ !q$$

p, q stand for boolean expressions

$$\begin{aligned} &!(\text{hours} > 40 \ \|\ \ \text{hours} < 20) \\ &\iff !(\text{hours} > 40) \ \&\& \ !(\text{hours} < 20) \\ &\text{hours} \leq 40 \ \&\& \ \text{hours} \geq 20 \end{aligned}$$

Topic: order of operators

Highest	!	(unary)-	(cast)	++	--
	*	/	%		
	+	-			
(relational)	<	<=	==	>=	> !=
	&&				
lowest					