

1

Logical Branching 1

Submitted on Today at 9:21 AM

```
long x = 10;
long y = x - 4;
boolean answer = y >= 6;
```

Does **answer** evaluate to true or false?

☒

true

☐

false

✓ Correct

RESET INPUT

CHECK ANSWER

▼ HIDE EXPLANATION

x

10

y

6

answer

true

2

Logical Branching 2

Submitted on Today at 9:25 AM

```
int x = 7;
int y = x % 2;
boolean answer = y >= 3;
```

Does **answer** evaluate to true or false?

☐

true

☒

false

✓ Correct

RESET INPUT

CHECK ANSWER

x = 7

y = 1

answer = false

3

Logical Branching 3

Submitted on Today at 9:27 AM

```
int x = 10;  
int y = 20;  
boolean answer = !(x > y);
```

10 > 20 => false
true

Does `answer` evaluate to true or false?



true



false

! - bang - reverse the boolean value

✓ Correct

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▼ HIDE EXPLANATION

10 isn't greater than 20, so `x > y` evaluates to `false`. The `!` outside the parenthesis negates the value inside, so `answer` becomes `true`.

4

Logical Branching 4

Submitted on Today at 9:34 AM

```
int x = 5;  
int y = 8;  
int z = 15;  
boolean answer = (x > y) || (z % x == 0);
```

F T
(5 > 8) || (15 % 5 == 0)

Does `answer` evaluate to true or false?



true



false

|| - OR -- pipes - if either side is T
whole expression is true

&& if either is F whole exp is false

^ - one side T and one side F
whole exp is true

✓ Correct

[RESET INPUT](#)[CHECK ANSWER](#)

```
/* Exercise 51
```

```
51. Bill and Jill are house painters. Bill can paint a standard room in 2.15 hours, while Jill averages 1.90 hours. How long will it take the two painters working together to paint 5 standard rooms?
```

```
Hint: Calculate the rate at which each painter can complete a room (rooms / hour), combine those rates, and then divide the total number of rooms to be painted by the combined rate.
```

```
*/
```

```
// bill can paint 1 room in 2.15 hours, how much of a room can he paint in 1 hour
```

```
int oneRoom = 1;
```

```
double billRate = 2.15;
```

```
double jillRate = 1.90;
```

```
double billRoomsPerHour = oneRoom / billRate;
```

```
double jillRoomsPerHour = oneRoom / jillRate;
```

```
double combinedRoomsPerHour = billRoomsPerHour + jillRoomsPerHour;
```

```
int totalRooms = 5;
```

```
double combinedRate = totalRooms / combinedRoomsPerHour;
```