

Truth tables for simple expressions:

**AND Truth Table**

A	B	A && B
True	True	True
True	False	False
False	True	False
False	False	False

**OR Truth Table**

A	B	A    B
True	True	True
True	False	True
False	True	True
False	False	False

Question 1.

For the statement  $A \ \&\& \ B$   
match the outcome of either “True” or “False” for  
all possible combinations.

1. A is true and B is true:
2. A is true and B is false:
3. A is false and B is true:
4. A is false and B is false:

Question 2.

For the statement  $A \ || \ B$   
match the outcome of either “True” or “False” for  
all possible combinations.

1. A is true and B is true:
2. A is true and B is false:
3. A is false and B is true:
4. A is false and B is false:

Question 3.

**A** symbolizes the question:  $n < 2$

**B** symbolizes the question:  $n > 0$

If  $n$  is 5, what is the result of  $A \ \&\& \ B$ ?

Question 5.

**A** symbolizes the question:  $n < 2$

**B** symbolizes the question:  $n > 0$

If  $n$  is 1, what is the result of  $A \ \&\& \ B$ ?

Question 7.

**A** symbolizes the question:  $n < -10$

**B** symbolizes the question:  $n > 0$

If  $n$  is -5, what is the result of  $A \ \&\& \ B$ ?

Question 4.

**A** symbolizes the question:  $n < 2$

**B** symbolizes the question:  $n > 0$

If  $n$  is 5, what is the result of  $A \ || \ B$ ?

Question 6.

**A** symbolizes the question:  $n < 2$

**B** symbolizes the question:  $n > 0$

If  $n$  is 1, what is the result of  $A \ || \ B$ ?

Question 8.

**A** symbolizes the question:  $n < -10$

**B** symbolizes the question:  $n > 0$

If  $n$  is -5, what is the result of  $A \ || \ B$ ?

Answers:

Question 1.

For the statement  $A \ \&\& \ B$

match the outcome of either “True” or “False” for all possible combinations.

5. A is true and B is true: **true**
6. A is true and B is false: **false**
7. A is false and B is true: **false**
8. A is false and B is false: **false**

Question 3.

A symbolizes the question:  $n < 2$

B symbolizes the question:  $n > 0$

If  $n$  is 5, what is the result of  $A \ \&\& \ B$ ?

**$5 < 2$  is false,  $5 > 0$  is true. For AND, all statements must be true, so the result is false.**

Question 5.

A symbolizes the question:  $n < 2$

B symbolizes the question:  $n > 0$

If  $n$  is 1, what is the result of  $A \ \&\& \ B$ ?

**$1 < 2$  is true,  $1 > 0$  is true. For AND, all statements must be true, so the result is true.**

Question 7.

A symbolizes the question:  $n < -10$

B symbolizes the question:  $n > 0$

If  $n$  is -5, what is the result of  $A \ \&\& \ B$ ?

**$-5 < -10$  is false,  $-5 > 0$  is false. For AND, all statements must be true, so the result is false.**

Question 2.

For the statement  $A \ || \ B$

match the outcome of either “True” or “False” for all possible combinations.

1. A is true and B is true: **true**
2. A is true and B is false: **true**
3. A is false and B is true: **true**
4. A is false and B is false: **false**

Question 4.

A symbolizes the question:  $n < 2$

B symbolizes the question:  $n > 0$

If  $n$  is 5, what is the result of  $A \ || \ B$ ?

**$5 < 2$  is false,  $5 > 0$  is true. For OR, at least one statement must be true, so the result is true.**

Question 6.

A symbolizes the question:  $n < 2$

B symbolizes the question:  $n > 0$

If  $n$  is 1, what is the result of  $A \ || \ B$ ?

**$1 < 2$  is true,  $1 > 0$  is true. For OR, at least one statement must be true, so the result is true.**

Question 8.

A symbolizes the question:  $n < -10$

B symbolizes the question:  $n > 0$

If  $n$  is -5, what is the result of  $A \ || \ B$ ?

**$-5 < -10$  is false,  $-5 > 0$  is false. For OR, at least one statement must be true, so the result is false.**