

Do-now:

Which statement is contrapositive logically equivalent to
"If a triangle has a right angle, it is not obtuse."

1) If a triangle does not have a right angle, it is obtuse. inverse

2) If a triangle is not obtuse, it has a right angle. converse

3) A triangle has a right angle if and only if it is obtuse. biconditional

4) If a triangle is obtuse, it does not have a right angle.

Complete the following tasks:

1. Stand up.
2. Clap your hands and march in place.

Complete the following tasks:

1. Stand up.
2. Clap your hands or march in place.

CONJUNCTION

$$p \wedge q$$

A compound statement that uses the word "and".

In order for a conjunction to be true, BOTH statements must be true.

DISJUNCTION

$$p \vee q$$

A compound statement that uses the word "or".

In order for a disjunction to be true, only ONE of the statements must be true.

(But both can be true, too!)

Divisible by 2 and 3: 24, 6, 12, 18, 30

when is this false? = 99, 100, 5, 10

Divisible by 2 or 3: 2, 9, 99, 100, 21

When

^{is}
this false? = 1, 13, 5, 11, 7, 17, 43

Read the compound statement below.
Determine if it is true or false.
Justify your answer.

F

T

The number 3 is even and the number 3 is odd.

False, b/c in order for a conjunction to be true, both statements must be true.

Read the compound statement below.
Determine if it is true or false.
Justify your answer.

F T
The number 3 is even or the number 3 is odd.

True, b/c in order for a
disjunction to be true, only
one statement needs to be true.

Find a value for x that makes the following statement true:

x is a multiple of 4 and divisible by 8

4: 4, ⑧, 12, ⑩, 20, ⑫, ...

8: ⑧, ⑩, ⑫, 32, ...

Find a value for x that makes the following statement true:

x is a multiple of 3 or x is divisible by 2

3 : ③, ⑥, ⑨, ⑫, ⑮, ...

2 : ②, ④, ⑥, ⑧, ⑩, ...

