Wednesday, September 17

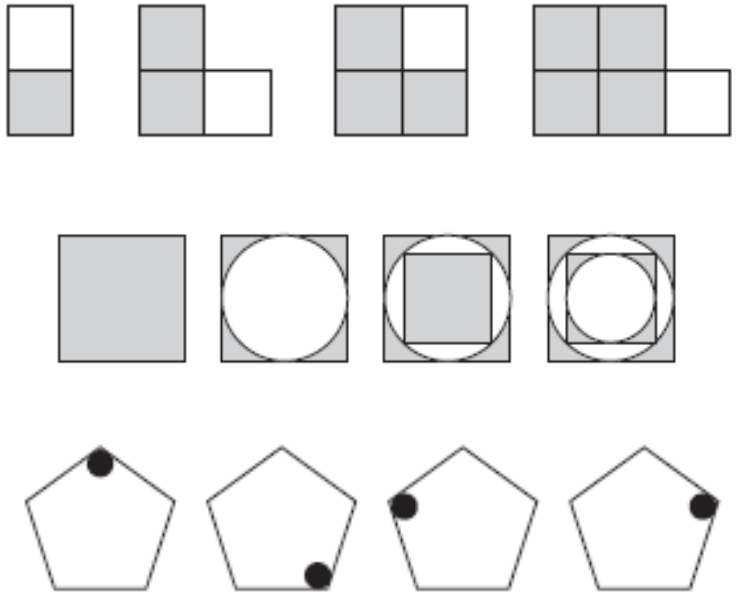
Objective

SWBAT-

Take conditional statements and create inverse, converse, and contrapositive statements

DO NOW

Sketch the next figure in the pattern



2.2 Conditional Statements

A conditional statement is written in an “if-then” form

If p, then q

2.2 Conditional Statements

Rewrite the conditional statement in if-then form.

a. All birds have feathers.

b. Two angles are supplementary if they are a linear pair.

a. **All birds** have **feathers**.

If **an animal is a bird**, then **it has feathers**.

b. **Two angles are supplementary** if **they are a linear pair**.

If **two angles are a linear pair**, then **they are supplementary**.

2.2 Conditional Statements

A negation is the opposite of a statement

The ball is red

The ball is not red

2.2 Conditional Statements

Converse

If q, then p

Inverse

If not p, then not q

Contrapositive

If not q, then not p

2.2 Conditional Statements

If I donate blood, then will save 3 lives

Converse

If q, then p

If I save 3 lives, then I donated blood

Inverse

If not p, then not q

If I don’t donate blood, then will not save 3 lives

Contrapositive

If not q, then not p

If I don’t save 3 lives, then I didn’t donate blood

2.2 Conditional Statements

When a conditional statement and its converse are both true, they can be written as a single biconditional statement. A biconditional statement is a statement that contains the phrase “if and only if.”

If a triangle is isosceles, then the triangle has two congruent sides.

A triangle is isosceles if and only if the triangle has two congruent sides.

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