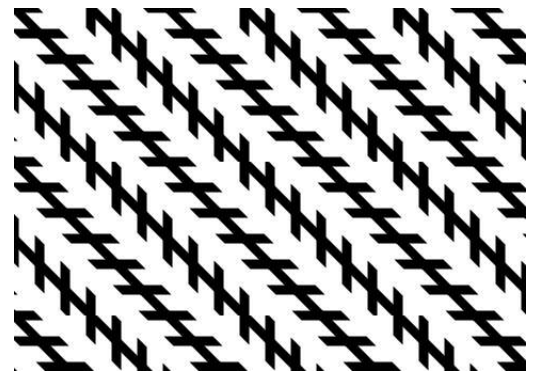
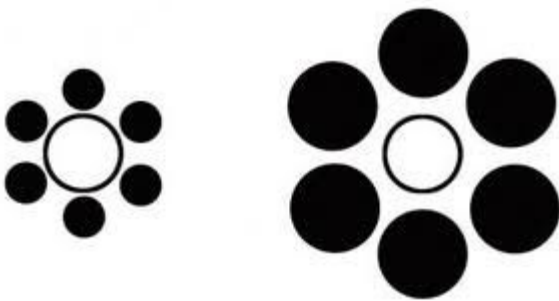
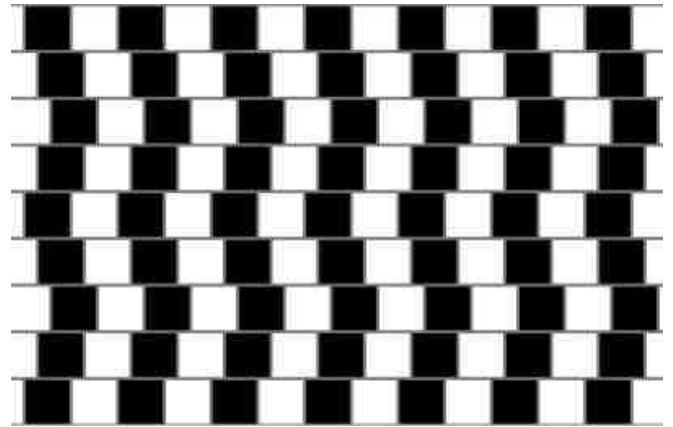


Name: _____

Date: _____

For each of the following images, make a conjecture:



Are your conjectures correct? How can you check (validate) them?

Conjectures**Counterexamples**

Example After seeing a number of triangles, Jeff conjectures that any three points make up a triangle.

- a) Is this conjecture always true?
- b) Can you think of a counterexample to prove this conjecture wrong?

Example Find the difference between consecutive perfect squares and make a conjecture.

- a) Is it possible that one pattern can give more than one conjecture?
- b) Can you find a counterexample to one of the conjectures above?

Example Jana observes the following pattern: $3+5=8$, $7+13=20$, $5+11=16$, $13+17=30$ and makes the conjecture "The addition of two prime numbers always equals an even number."

- a) Find a counterexample that proves the conjecture false.
- b) Revise the conjecture so that it is harder to disprove.