

**Day 2 - Conjectures and Counterexamples**

$$6 + 7 + 8 + 9 = 30$$

$$1 \quad 2$$

Complete Investigate Pg. 381

$$14 + 15 + 16 = 45$$

$$4$$

**Conjecture:** A conclusion that has been arrived at inductively. While a conjecture is more than a guess, there is a chance that it could be false, just as a guess could be wrong.

**Counterexample:** An example that shows a conjecture is false.

For each of the following conjectures find a counterexample

Every mammal has fur

Whale

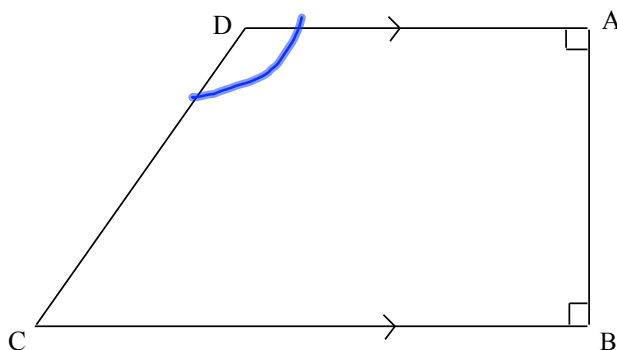
Two straight lines always intersect

Parallel lines

The square of every even number is even

True

For which of the following conjecture(s) is the diagram below a counterexample?



*Trapezoid*

- a) The opposite angles of a parallelogram are equal.
- b) A quadrilateral cannot have both a 90 degree angle and an obtuse angle.
- c) Every trapezoid has two pairs of equal angles.

Assignment:

Pg. 382 1-4 and 9

Plus handout on 6.1-6.3