

Name: *Key*

Section 2.1-2.2 Homework

Pg 77: 2-4, 8-10, 25-27

Pg. 84: 3-5, 9-11

Find the next item in each pattern.

2. March, May, July, ...

September

3. $\frac{1}{3}, \frac{2}{4}, \frac{3}{5}, \dots$

$\frac{4}{6}$

4. $| \circ |, \begin{array}{|c|} \hline \circ \\ \hline \end{array}, | \circ \circ |, \dots$

$\begin{array}{|c|} \hline \circ \\ \hline \end{array}$

Show that each conjecture is false by finding a counterexample.

8. Kennedy is the youngest U.S. president to be inaugurated. *False, T. Roosevelt was 42*

9. Three points on a plane always form a triangle.

10. For any real number x , if $x^2 \geq 1$, then $x \geq 1$.

False, they can be collinear.

*False, $x = -2$ $(-2)^2 \geq 1$, but $-2 \geq 1$
yes NO*

President	Age at Inauguration
Washington	57
T. Roosevelt	42
Truman	60
Kennedy	43
Clinton	46

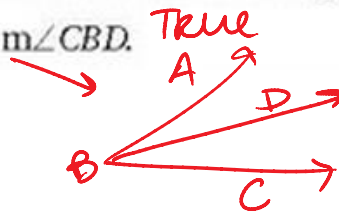
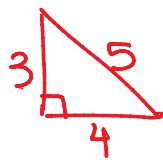
Determine if each conjecture is true. If not, write or draw a counterexample.

25. If n is an integer, then $-n$ is positive. *False, let $n = 5$, then $-5 = \text{neg}$*

26. In a triangle with one right angle, two of the sides are congruent.

27. If \overrightarrow{BD} bisects $\angle ABC$, then $m\angle ABD = m\angle CBD$.

False



Name:

Identify the hypothesis and conclusion of each conditional.

3. If a person is at least 16 years old, then the person can drive a car.
4. A figure is a parallelogram if it is a rectangle.
5. The statement $a - b < a$ implies that b is a positive number.

Determine if each conditional is true. If false, give a counterexample.

9. If three points form the vertices of a triangle, then they lie in the same plane. **True**
10. If $x > y$, then $|x| > |y|$. **False** $-2 > -3, |2| < |3|$
11. If the season is spring, then the month is March.
False, could be April.