NAME _____   DATE _____

3-13   WHAT'S THE RELATIONSHIP?

Four angles are related in the following ways:

- $m\angle A$ is three times the $m\angle B$.
- $m\angle C$ is 15 more than the $m\angle B$.
- $m\angle D$ is 27 more than $2m\angle B$.

Find the measure of each angle and the $m\angle B$ so that each of the following relationships is true:

1. $\angle A \approx \angle D$

2. $\angle C$ is a right angle.

3. $\angle A$ and $\angle C$ are complementary.

4. $\angle A$ and $\angle B$ are supplementary.

5. $\angle A$, $\angle B$, and $\angle D$ form an acute triangle.

6. $\angle A$, $\angle B$, $\angle C$, and $\angle D$ form a quadrilateral.

7. Two angles congruent to $\angle C$ are the base angles of an isosceles triangle. $\angle D$ is the vertex angle.

8. Four angles congruent to $\angle A$ form a rectangle.