Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Making Conclusions: An Introduction to Proof Writing HW

Directions: Make a geometric conclusion based on the given information or diagram. You may need to draw a figure to visualize the concept prior to making a conclusion. Then use your justifications to explain the geometric conclusion.



1. 7.

2.

 8.

3.

 9.

4.

 10.

5.



 11.



6.

Directions: Fill in the correct justifications to make a logical argument.

12.

Statements: Reasons:

1. 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



2. 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. 3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



4. 4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



5. 5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



13. Given: $\vec{DB} is an angle bisector of<ADC$

 Prove: <2$ ≅ $<3

Statements: Reasons:

1. $\vec{DB} is an angle $ 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

$$bisector of<ADC$$

2. <2$ ≅ $<1 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. <1$ ≅ $<3 3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. <2$ ≅ $<3 4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Making Conclusions: An Introduction to Proof Writing Notes**

Directions: Make a geometric conclusion based on the given information or diagram. You may need to draw a figure to visualize the concept prior to making a conclusion. Then use your justifications to explain the geometric conclusion.

1.



2.



3.



4.

Proof Notes

**Proof:** A mathematical argument or explanation that begins with known facts, uses definitions, axioms, postulates, theorems to arrive at a conclusion about a geometric statement.

**Steps to writing a two-column proof:**

1. First state the given.
2. What can you conclude from the given?
3. What can you conclude from the diagram?
4. Redecorate & Reason
5. End with what you wanted to prove.
6. Double check logic and make sure your steps are numbered.

Skeleton Proof: Fill in the blank proof.

5.

Statements: Reasons:

1. 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. 3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. 4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. 5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6. 6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7. 7. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



6. Given: <2$≅$<3

 Prove: <1$≅$<4

Statements: Reasons:

1. <2$≅$<3 1.

2. <2$≅$<1 2.

3. <4$≅$<3 3.

4. <1$≅$<4 4.