

HW#3 - Quiz Review:
1-4, 6, 9-11, 13AB
14

textbook p ~~138~~ 145

~~1, 4, 7, 10, 12~~
2, 5-6, 8-9,
12, 15

1. What is the converse of the statement, "If a strawberry is red, then it is ripe"?
2. What is the inverse of the statement, "If you can sing, then you can go with Sarah"?

3. Which statement has a true converse?

- A. If a vehicle is a car, then it has four wheels.
- B. If you go to Asia from the United States, then you cross an ocean.
- C. If you own a dog, then your pet is furry.
- D. If you can stand up, then you can walk.
- E. None of these

4. Which of the following is the contrapositive of the statement, "If two angles are right angles, then they are congruent"? Is it true or false?

- A. If two angles are congruent, then they are right angles.
- B. If two angles are right angles then they are congruent. If two angles are congruent then they have the same measure. Therefore, if two angles are right angles, then they have the same measure.
- C. If two angles are not congruent, then they are not right angles.
- D. If two angles are not right angles, then they are not congruent.

5. Which property justifies the statement?

If $4AB = 8CD$, then $AB = 2CD$.

6. What conclusion can you draw from the following two statements?

If you have a job, then you have income.

If you have an income, then you must pay taxes.

7. Which property justifies the statement? If $4x = 16$, then $16 = 4x$.

8. The Transitive Property of Equality justifies which statement below?

- A. If $y - 17 = g$, then $y = g + 17$.
- B. If $AM = RS$, then $RS = AM$.
- C. If $5(3a - 4) = 120$, then $15a - 20 = 120$.
- D. If $\angle J \cong \angle R$ and $\angle R \cong \angle H$, then $\angle J \cong \angle H$.
- E. $\angle M \cong \angle M$

9. Give the inverse of the statement: If you study in front of the TV, then you do not score well on exams. T/F?

10. What is the contrapositive of the following conditional statement?

If Peg serves pudding, then it is not Laura's birthday.

11. What conclusion can you draw from the following two statements?

If a person does not get enough sleep, that person will be tired.

Evan does not get enough sleep.

12. Give the property that justifies each step of the following algebraic equation. Is this deductive or inductive reasoning?

$$4(x-5) + 8 = -2x + 17$$

$$4x - 20 + 8 = -2x + 17$$

$$4x - 20 = -2x + 9$$

$$4x - 29 = -2x$$

$$-29 = -6x$$

$$29/6 = x$$

$$x = 29/6$$

13. A. Inductive reasoning leads to a generalization called a _____. This can be proved to be incorrect if a _____ can be found.

B. _____ reasoning uses facts, logic, and/or evidence to advance an argument to a valid conclusion. Mathematically this conclusion is called a _____.

C. In a mathematical proof, the premises that can be used to justify statements are postulates, _____, or proved _____.

D. A postulate is:

14. Inductive or deductive and how do you know? A. Ellen conducted an experiment on test scores. She asked several friends how much time they studied for their last math test and what their score was. She noticed that people who spent more time studying made higher scores. She concluded that studying longer gets higher grades.

B. Jenna lost her jacket this morning. She remembers having it in Spanish 2nd period. It's 4th period and she does not have it. She went to her locker after 3rd period. Therefore she needs to check her locker and her 2nd and 3rd period classes for her jacket.