

Practice 2-1

1. Sample: It is 12:00 noon on a rainy day. 2. Sample: The car will not start because of a dead battery. 3. Sample: 6
4. If you are strong, then you drink milk. 5. If a rectangle is a square, then it has four sides the same length.
6. If you are tired, then you did not sleep. 7. If $x = 26$, then $x - 4 = 22$; true. 8. If $x > 0$, then $|x| > 0$; true. 9. If m is positive, then m^2 is positive; true.
10. If $2y - 1 = 5$, then $y = 3$; true. 11. If $x > 0$, then point A is in the first quadrant; false; $(4, -5)$ is in the fourth quadrant. 12. If lines are parallel, then their slopes are equal; true. 13. If you have a sibling, then you are a twin; false; a brother or sister born on a different day.

14.



15. Hypothesis: If you like to shop; conclusion: Visit Pigeon Forge outlets in Tennessee. 16. Pigeon Forge outlets are good for shopping. 17. If you visit Pigeon Forge outlets, then you like to shop. 18. It is not necessarily true. People may go to Pigeon Forge outlets because the people they are with want to go there. 19. Drinking Sustain makes you train harder and run faster. 20. If you drink Sustain, then you will train harder and run faster. 21. If you train harder and run faster, then you drink Sustain.

Practice 2-2

- Two angles have the same measure if and only if they are congruent.
- $2x - 5 = 11$ if and only if $x = 8$.
- The converse, "If $|n| = 17$, then $n = 17$," is not true.
- A figure has eight sides if and only if it is an octagon.
- If a whole number is a multiple of 5, then its last digit is either 0 or 5. If a whole number has a last digit of 0 or 5, then it is a multiple of 5.
- If two lines are perpendicular, then the lines form four right angles. If two lines form four right angles, then the lines are perpendicular.
- If you live in Texas, then you live in the largest state in the contiguous United States. If you live in the largest state in the contiguous United States, then you live in Texas.
- Sample: Other vehicles, such as trucks, fit this description.
- Sample: Other objects, such as spheres, are round.
- Sample: This is not specific enough; many numbers in a set could fit this description.
- Sample: Baseball also fits this definition.
- Sample: *Pleasing*, *smooth*, and *rigid* all are too vague.
- yes
- no
- yes

Practice 2-3

- $\angle A$ and $\angle B$ are complementary.
- Football practice is canceled for Monday.
- $\triangle DEF$ is a right triangle.
- If you liked the movie, then you enjoyed yourself.
- If two lines are not parallel, then they intersect at a point.
- If you vacation at the beach, then you like Florida.
- not possible
- Tamika lives in Nebraska.
- not possible
- It is not freezing outside.
- Shannon lives in the smallest state in the United States.
- On Thursday, the track team warms up by jogging 2 miles.