

Proof Reasons List Ch 1 and 2 "Discovering Geometry"

1. Reflexive Property $a=a$
2. Substitution (= only) If $a=b$ and $a+2 = c$ then $b + 2 = c$
3. Transitive (= or \cong) If $a = b$ and $b= c$ then $a=c$
4. Symmetric Property If $a = b$, then $b = a$
5. Add/Subtr Property of Equality If $AB + CD = PQ + CD$, then $AB = PQ$
6. Segment Addition Postulate (2 or more segments add up to the whole segment)
7. Angle Addition Postulate (2 or more angles add up to the whole angle)
8. If perpendicular (\perp) lines then right angles(or 90°). If right angles(or 90°), then perp (\perp) lines
9. If right angles then \cong .
10. If vertical angles, then \cong .
11. If 2 \angle 's are supp, then add to 180. If 2 angles add to 180, then supp.
12. If 2 \angle 's are comp, then add to 90 (or from right angle). If 2 angles add to 90 (or from right angle), then comp.
13. If linear pair then supplementary (or add to 180).
14. If measures equal, then congruent. If \cong , then measures =.
15. If midpoint, then \cong segments. If a segment is divided into \cong segments, then midpoint.
16. If angle bisector, then \cong angles. If \cong angles then angle bisector.
17. If lines parallel, then . . .Alt Int's \angle 's \cong . If Alt Int's \angle 's \cong , then lines parallel.
18. If lines parallel, then . . .Alt Ext's \angle 's \cong . If Alt Ext's \angle 's \cong , then lines parallel.
19. If lines parallel, then . . .Corres \angle 's \cong . If Corres \angle 's \cong , then lines parallel.
20. If lines parallel, then . . .SSI \angle 's are supp. If SSI \angle 's are supp, then lines parallel.
21. If lines parallel, then . . .SSE \angle 's are supp. If SSE \angle 's are supp, then lines parallel.
22. If line perpendicular to 1 of 2 parallel lines, then it is perpendicular to the other.
23. If 2 lines perpendicular to the same line, then the lines are parallel.
24. If 2 angles are comp (or supp) to same angle (or congruent) then \cong .