

Answers for Lesson 2-4, pp. 105–107 Exercises

1. a. \angle Add. Post.
b. Subst. Prop.
c. Simplify.
d. Subtr. Prop. of =
e. Div. Prop. of =
2. a. Segment Add. Post.
b. Subst. Prop.
c. Distributive Prop.
d. Simplify.
e. Subtr. Prop. of =
f. Div. Prop. of =
3. a. Mult. Prop. of =
b. Distr. Prop.
c. Add. Prop. of =
4. a. Distr. Prop.
b. Subtr. Prop. of =
c. Div. Prop. of =
5. Reflexive Prop. of \cong
6. Distr. Prop.
7. Div. Prop. of =
8. Symmetric Prop. of \cong
9. Mult. Prop. of =
10. Reflexive Prop. of =
11. Subtr. Prop. of =
12. Symmetric Prop. of =
13. Sub. Prop.
14. Add. Prop. of =
15. Transitive Prop. of =
16. 15
17. $5x$
18. $YU = AB$
19. $\angle K$
20. $\angle PQR$
21. 3
22. $EF + 7$
23. $\angle XYZ \cong \angle WYT$
24. C
25. Answers may vary. Sample: \overline{LR} and \overline{RL} are different ways to name the same segment and $\angle CBA$ and $\angle ABC$ are different ways to name the same \angle .
26. C

Answers for Lesson 2-4, pp. 105–107 Exercises (cont.)

27. a. Given
b. Def. of midpoint
c. Subst. Prop. of =
d. Subtr. Prop. of =
e. Div. Prop. of =
28. a. 1. $KL + LM = KM$ (Segment Add. Post.)
2. $2x - 5 + 2x = 35$ (Subst. Prop.)
3. $4x - 5 = 35$ (Simplify.)
4. $4x = 40$ (Add. Prop. of =)
5. $x = 10$ (Div. Prop. of =)
b. 15
29. a. 1. $m\angle GFE + m\angle EFI = m\angle GFI$ (\angle Addition Post.)
2. $9x - 2 + 4x = 128$ (Subst. Prop.)
3. $13x - 2 = 128$ (Simplify.)
4. $13x = 130$ (Add. Prop. of =)
5. $x = 10$ (Div. Prop. of =)
b. 40
30. a. Given b. Def. of \angle Bisector
c. Subst. Prop. d. Subtr. Prop. of =
e. Div. Prop. of =

Answers for Lesson 2-4, pp. 105–107 Exercises (cont.)

- 31.** In the fifth step, each side is divided by $(b - a)$. But $b - a = 0$ and division by 0 is not defined.
- 32.** reflexive, symmetric, transitive **33.** transitive
- 34.** reflexive, symmetric, transitive **35.** symmetric
- 36.** reflexive, symmetric, transitive **37.** transitive