

2. $\triangle DEF \sim \triangle GHI$ (SSS \sim) 3. $\angle E \cong \angle H$ (Corr. \angle of $\sim \triangle$ are \cong .) 13. 1. $\frac{VW}{VX} = \frac{VZ}{VY}$ (Given)
 2. $\angle V \cong \angle V$ (Reflex.) 3. $\triangle VWZ \sim \triangle VXY$ (SAS \sim) 4. $\angle 1 \cong \angle 2$ (Corr. \angle of $\sim \triangle$ are \cong .) 5. $\overline{WZ} \parallel \overline{XY}$
 (If corr. \angle \cong , lines \parallel .) 15. 1. $\frac{JL}{NL} = \frac{KL}{ML}$ (Given) 2. $\angle MLN \cong \angle KLJ$ (Vert. \angle \cong .) 3. $\triangle MLN \sim \triangle KLJ$
 (SAS \sim) 4. $\angle J \cong \angle N$ (Corr. \angle of $\sim \triangle$ are \cong .)

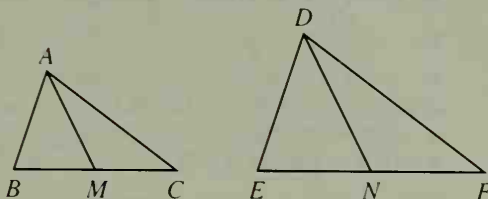
17. Given: $\triangle ABC \sim \triangle DEF$; \overline{AM} and \overline{DN} are medians.

Prove: $\frac{AM}{DN} = \frac{AB}{DE}$

Key steps of proof: 1. $BM = \frac{1}{2}BC$; $EN = \frac{1}{2}EF$

(Midpt. Thm.) 2. $\frac{BC}{EF} = \frac{AB}{DE}$ (Corr. sides of $\sim \triangle$ are

in prop.) 3. $\frac{BM}{EN} = \frac{AB}{DE}$ (Subst.) 4. $\triangle ABM \sim \triangle DEN$ (SAS \sim) 5. $\frac{AM}{DN} = \frac{AB}{DE}$ (Corr. sides of $\sim \triangle$ are in prop.)



Mixed Review Exercises, Page 268

1. a. \overline{GC} ; \overline{EF} b. 18 c. 3 d. 90 2. a. Midpt., \overline{RV} b. 2 c. 4

Written Exercises, Pages 272–273

1. a. No b. Yes c. Yes d. No e. Yes f. Yes 3. 7.5 5. 26 7. 18 9. 14.5 11. 4
 13. $AN = 10$ 15. $RT = 8$; $AN = 18$; $NP = 12$; $TP = 25$ 17. $AR = 8$; $NP = 6$; $AP = 12$ 21. 22.5
 23. 78 25. 0.5

Self-Test 2, Page 274

1. SSS \sim 2. AA \sim 3. SAS \sim 4. a. $\triangle EDC$ b. ED ; EC ; DC c. 10; x; 14 d. 10; y; 18 5. r
 6. p 7. h 8. a 9. 12 10. 14 11. $6\frac{2}{3}$

Extra, Page 276

1. c 3. b 5. d

Chapter Review, Pages 277–278

1. 3:5 3. $\frac{2y}{3x}$ 5. No 7. Yes 9. $\angle J$ 11. a. 12 b. 50 13. a. $\triangle UVH$ b. AA \sim
 15. UH ; $\frac{RT}{UV}$ 17. $\triangle NCD \sim \triangle NAB$; AA \sim 19. No 21. 2 23. 14.4

Algebra Review, Page 280

1. 6 3. $2\sqrt{6}$ 5. $10\sqrt{3}$ 7. $\frac{\sqrt{15}}{3}$ 9. 1 11. 13 13. 12 15. 162 17. $12\sqrt{3}$ 19. $10\sqrt{2}$
 21. 5 23. 12 25. $\sqrt{65}$ 27. $2\sqrt{2}$ 29. 7

Cumulative Review, Pages 281–283

- True-False Exercises** 1. F 3. F 5. T 7. F 9. F 11. F **Multiple-Choice Exercises** 1. d
 3. d 5. c **Always-Sometimes-Never Exercises** 1. S 3. S 5. N 7. A 9. S 11. A
 13. A 15. S **Completion Exercises** 1. 120 3. obtuse 5. 108 7. rect. 9. 36
Algebraic Exercises 1. 6 3. 84 5. 20 7. 7 9. 6 11. 15 13. 16 cm, 20 cm, 28 cm
 15. $x = 6$, $y = 3.5$ **Proof Exercises** 1. 1. $\overline{SU} \cong \overline{SV}$; $\angle 1 \cong \angle 2$ (Given) 2. $\overline{QS} \cong \overline{QS}$ (Reflex.)
 3. $\triangle QUS \cong \triangle QVS$ (SAS) 4. $\overline{UQ} \cong \overline{VQ}$ (CPCT) 3. Key steps of proof: 1. $\overline{QR} \cong \overline{QT}$; $\angle R \cong \angle T$;
 $\overline{RU} \cong \overline{TV}$ (CPCT) 2. $\overline{RS} \cong \overline{TS}$ (Seg. Add. Post and Add. Prop. =) 3. $\triangle QRS \cong \triangle QTS$ (SAS)
 5. 1. $\overline{EF} \parallel \overline{JK}$; $\overline{JK} \parallel \overline{HI}$ (Given) 2. $\overline{EF} \parallel \overline{HI}$ (Thm. 3-10) 3. $\angle 2 \cong \angle 3$; $\angle F \cong \angle H$ (If lines \parallel , alt. int. \angle \cong .)
 4. $\triangle EFG \sim \triangle IHG$ (AA \sim)