

- Practice 11**
1. sometimes
 2. always
 3. sometimes
 4. sometimes
 5. 360
 6. 90
 7. $(n - 2)180$
 8. 90
 9. 17
 10. 60; 70
 11. 120; 60
 12. -4, 2, -1
 13. 4, 16, 8
 14. $\angle A$ and $\angle B$ are acute.
 15. none

- Practice 12**
1. $\angle 8$
 2. $\angle 6$
 3. $\angle 5$
 4. 9, 134, 134
 5. 15, 137, 43
 6. 45, 45, 135
 7. always
 8. sometimes
 9. always
 10. always
 11. sometimes
 12. inductive
 13. deductive
 14. 24
 15. 75, 56, 49
 16. 36

- Practice 13**
1. 90
 2. 3
 3. BC
 4. exactly 1
 5. 360
 6. $\angle CFD$
 7. $\angle CGE$
 8. FD
 9. BCE
 10. no
 11. 11
 12. point B
 13. \overrightarrow{AC}
 14. $\angle AFB$
 15. If $-x > 0$, then $x < 0$
 16. 20
 17. 1. Given
 2. If lines \parallel , alt. int. $\sphericalangle \cong$.
 3. If 2 \sphericalangle of one \triangle are \cong to 2 \sphericalangle of another \triangle , then the third \sphericalangle are \cong .

- Practice 14**
1. \overline{OP}
 2. BI
 3. $\angle O$
 4. $m\angle G$
 5. $\triangle OTP$
 6. $\triangle IGB$
 7. sometimes
 8. always
 9. never
 10. SAS
 11. ASA
 12. No \cong can be deduced.
 13. ASA
 14. No \cong can be deduced.
 15. SAS

16. Statements	Reasons
1. M is the midpt. of \overline{XY} .	1. Given
2. $\overline{XM} \cong \overline{YM}$	2. Def. of a midpt.
3. $\overline{ZM} \cong \overline{ZM}$	3. Refl. Prop.
4. $\overline{XM} \cong \overline{ZM}$	4. Given

4. $\overline{WX} \cong \overline{ZY}$
5. $\triangle XWZ \cong \triangle ZYX$
6. $\overline{WX} \cong \overline{ZY}$
7. $WXYZ$ is a \square .

4. Refl. Prop.
5. AAS
6. Corr. parts of $\cong \triangle$ are \cong .
7. If pr. of opp. sides of quad. are \parallel and \cong , then quad. is \square .

- Practice 21** 1. $\angle T; \overline{HT}; \triangle HTA$ 2. $\angle R \cong \angle I$
 3. 38 4. SAS, SSS, ASA Posts.; AAS, HL Thms.
 5. \perp bis. 6. square 7. rhombus 8. rect.
 9. isos. trap. 10. SAS 11. HL or AAS
 12. ASA

13. Statements	Reasons
1. $\overline{QD} \parallel \overline{UA}$	1. Given
2. $\angle DQA \cong \angle QAU;$ $\angle QDU \cong \angle DUA$	2. If \parallel lines, then alt. int. \angle s are \cong .
3. R is midpt. of \overline{QA} .	3. Given
4. $\overline{QR} \cong \overline{AR}$	4. Def. of midpt.
5. $\triangle QRD \cong \triangle ARU$	5. AAS
6. $\overline{QD} \cong \overline{AU}$	6. Corr. parts of $\cong \triangle$ are \cong .
7. $\overline{QA} \cong \overline{QA}$	7. Refl. Prop.
8. $\triangle QAD \cong \triangle AQU$	8. SAS

- Practice 22** 1. yes 2. yes 3. no 4. yes
 5. no 6. no 7. True. If 2 \angle s are not supps., then they are not rt. \angle s; true. If 2 \angle s are supps., then they are rt. \angle s; false. If 2 \angle s are not rt. \angle s then they are

6. $AD \cdot AD = (AC)^2$

8. Means-extremes Prop.

- Practice 27** 1. $\triangle GHI \sim \triangle JKI$; AA \sim Post.
 2. No 3. $\triangle POQ \sim \triangle LMN$; SSS \sim Thm.
 4. $\triangle XYN \sim \triangle YZN$; SAS \sim Thm. 5. 15 6. 16
 7. 15 8. 16, 24, 12, 18 9. 7, 14, 10, 22 10. 10, 9, 15, 22.5 11. 4.9 m

- Practice 28** 1. $\frac{b}{a}$ 2. $\frac{3}{z}$ 3. $\frac{b+2}{2}$ 4. 6 5. 20
 6. 10 7. a. $\frac{4}{3}$ b. $7\frac{1}{2}$ c. 12 d. 3 8. 9
 9. $4\frac{1}{2}$ 10. 6

11. Statements	Reasons
1. $\angle 1 \cong \angle 2$	1. Given
2. $\angle A \cong \angle A$	2. Refl. Prop.
3. $\triangle ADE \sim \triangle ABC$	3. AA \sim Post.
4. $\frac{AD}{AB} = \frac{AE}{AC}$	4. Corr. sides of $\sim \triangle$ are in prop.

- Practice 29** 1. 2 2. $<$ 3. $\frac{JK}{JM}$ 4. 3; 13
 5. LJM 6. $\frac{JK}{JL}$ 7. $>$ 8. $\frac{3}{4}$ 9. $\frac{d}{c}$ 10. 4
 11. 4 12. 12 13. If a quad. is a square, then it is a rect. 14. If a quad. is not a rect., then it is not a square. 15. $ABCD$ is not a square. 16. Assume temp. that $\angle Z \cong \angle Y$. 17. 18

- Practice 30** 1. $\overrightarrow{YZ}; \overrightarrow{YW}$ 2. 141 3. $\angle 1; \angle 2$
 4. 7 5. $\angle ZYX$ 6. $\overline{WZ}; \overline{XY}$ 7. 180 8. 91

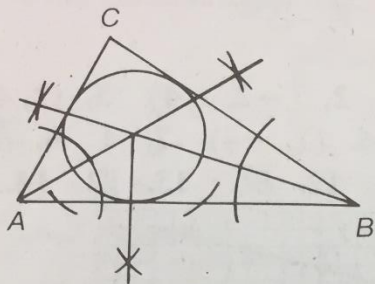
9. median 10. 10 11. $\overline{WY}; \overline{ZX}$ 12. $<$ 13. Y
 14. $>$ 15. $\frac{a+b}{b}$ 16. $PA = PC = PB$ 17.
 altitude; median; \perp bis. 18. the sides of the \angle
 19. 5 20. \perp 21. 1260 22. If $\triangle ABC \sim \triangle XYZ$,
 then $\triangle ABC \cong \triangle XYZ$; false.
 23. If $\triangle ABC \cong \triangle XYZ$, then $\triangle ABC \neq \triangle XYZ$;
 false. 24. If $\triangle ABC \neq \triangle XYZ$, then $\triangle ABC \cong$
 $\triangle XYZ$; true. 25. \overline{DE} 26. trap. 27. 13
 28. $\overleftrightarrow{BG}, \overleftrightarrow{CF}, \overleftrightarrow{DE}$ 29. $\triangle ACF; \triangle ADE$ 30. =
 31. corr. 32. alt. int. 33. s-s. int. 34. vert.
 35. 16 36. 3 37. 7 38. 1. $VW = YX$ (Def. of
 median) 2. $\angle VWX \cong \angle YXW$ (Isos. \triangle Thm.)
 3. $\triangle VWX \cong \triangle YXW$ (SAS) 4. $\angle WVX \cong \angle XYW$
 (Corr. parts of $\cong \triangle$ are \cong .) 5. $\angle VZW \cong \angle YZX$
 (Vert. \triangle are \cong .) 6. $\triangle VZW \cong \triangle YZX$ (AAS)

- Practice 31** 1. 45 2. $\frac{5}{6}$ 3. $7\sqrt{2}$ 4. $8\sqrt{2}$
 5. $\frac{\sqrt{15}}{5}$ 6. $\frac{\sqrt{10}}{5}$ 7. 3 8. 20 9. $\frac{3}{4}$ 10. 4
 11. 12 12. $\sqrt{39}$ 13. $2\sqrt{10}$ 14. $4\sqrt{2}, 4\sqrt{3},$
 $4\sqrt{6}$ 15. 9, 5, $3\sqrt{5}$ 16. 10 17. 15 18. 7
 19. $5\sqrt{3}$ 20. $13x$ 21. $2\sqrt{11}$ 22. $2\sqrt{13}$
 23. $2\sqrt{3}$ 24. 13

- Practice 32** 1. acute 2. right 3. not possible
 4. right 5. obtuse 6. right 7. 3; $3\sqrt{2}$
 8. $\frac{1}{2}; \frac{\sqrt{2}}{2}$ 9. $\sqrt{2}; 2$ 10. $4\sqrt{2}; 4\sqrt{2}$ 11. $\sqrt{3}; \sqrt{3}$
 14. 10; $10\sqrt{3}$ 15. 6; $4\sqrt{3}$

$$\sqrt{a^2 + b^2}, MA = \sqrt{(a - 2a)^2 + (b - 0)^2} = \sqrt{a^2 + b^2}; MO = MB = MA$$

14.



15. 102 m^2 16. $32\sqrt{2} \text{ ft}^2$ 17. $288\sqrt{3} \text{ cm}^2$
 18. 180 19. $36\pi \text{ m}^2$ 20. 30π 21. 144 cm^2 ;
 208 cm^2 ; 192 cm^3 22. 540; 864; 1296
 23. 256π ; 384π ; 1024π 24. 180π ; 324π ; 432π
 25. $900\pi \text{ cm}^2$; $4500\pi \text{ cm}^3$ 26. $83\frac{1}{3} \text{ m}^3$
 27. $(-5, 10)$ 28. $(24, 21)$ 29. 10 30. $(3, 1)$
 31. $\frac{4}{3}$ 32. $x^2 + (y + 3)^2 = 100$
 33. $3x + 4y = 11$

MIXED REVIEW

- Chapters 1-3 1. F 2. $\overleftrightarrow{AE}, \overleftrightarrow{DH}, \overleftrightarrow{EH}, \overleftrightarrow{AD}$ 3. \overleftrightarrow{EH}
 4. no 5. 48 6. $B; \overleftrightarrow{BA}, \overleftrightarrow{BD}$ 7. 7 8. a. 39, 59, 82
 b. acute 9. 18 10. a. corr. b. alt. int. 11. 90
 12. 120 13. 135 14. 1. Given 2. If lines \parallel , alt.
 int. $\triangle \cong$. 3. If lines \parallel , corr. $\triangle \cong$. 4. Given
 5. Def. of \angle bis. 6. Substitution Prop.
 15. $m\angle R = 96, m\angle S = 84$ 16. a. If $x \neq 0$, then $\frac{1}{x}$

def. of \cong
 \cong . 30. a
 31. Exar
 32. right
 34. $\frac{y+5}{5}$
 b. If $\frac{1}{x}$

Chapter

3. Subs

7. 1 8

11. 2

15. $m\angle$

18. KL

20. 10

22. 80

27. 40

30. th

$y = 35$

$m\angle A$

is ex.

39. 3

41. 4

Chap

3. 4

5. ol

8. a.

12.

16.

RE

Co

1. D

is defined. b. If $\frac{1}{x}$ is defined, then $x \neq 0$.

17. $\frac{1}{81}, -\frac{1}{243}$ 18. $x = 23$ 19. $x = 144$

20. inductive

) 5. $-\frac{7}{3}$

0 9. no

. (2, 4)

Chapters 1-5 1. If each orange costs less than 25¢, then oranges are sold at four for 99¢.

2. $m\angle 2 = 30, m\angle 3 = 60, m\angle 4 = 60$ 3. 12, 16,

20 4. 130 5. a. SAS Post. b. SAS Post.

c. Corr. parts of $\cong \triangle$ are \cong . d. SSS Post.

6. $x = 12, y = 15$ 7. $AFGD, AEGC,$ or $ABGH$

8. $\overleftrightarrow{AB}, \overleftrightarrow{BC}, \overleftrightarrow{EF}, \overleftrightarrow{FG}$ 9. $m\angle 2 = 60, m\angle 3 = 120,$

$m\angle 4 = 30$ 10. pentagon 11. ASA Post.

12. bis. of $\angle SRT$ 13. $m\angle 2 = 35, m\angle 3 = 55,$

$\frac{1}{2} = 1;$

$m\angle 4 = 55, m\angle 5 = 90$ 14. 35 15. $\overline{AR} \parallel \overline{PE}$ or

$\overline{AP} \cong \overline{RE}$ 16. 80, 80 17. right 18. Corr. parts

of $\cong \triangle$ are \cong . 19. $m\angle B = 50, m\angle D = 40,$

$m\angle E = 50$ 20. HL Thm. 21. 2.5

\overline{OE}

14

Chapters 1-7 1. 14 2. Subtraction Prop. of =

3. HL, AAS, ASA, SAS, SSS 4. 27 5. 12

6. Jack Laughton did not drive. 7. no 8. 15

9. collinear 10. AA \sim Post. 11. Assume temp.

that $\overline{AC} \cong \overline{BC}$. 12. 74 13. 4, 18 14. 3.5

15. 28 16. $\angle A \cong \angle C, \angle ADB \cong \angle CDB,$

$\angle ABD \cong \angle CBD$ 17. 72, 108, 108 18. $\frac{1}{15}, \frac{1}{90}$

19. a. yes b. SSS \sim Thm. 20. 5 21. 128

22. $\angle DPQ$ 23. 44, 46, 136 24. 12

25. 45, 75, 60 26. \overline{AC} 27. 108 28. 28

29. a. Corr. parts of $\cong \triangle$ are \cong . b. Def. of alt.;

=

def. of $\cong \triangle$ c. AAS d. Corr. parts of $\cong \triangle$ are

\cong . 30. a. $EF = 20, AC = 10.8$ b. 3:5

31. Examples: $\angle A \cong \angle T, \overline{PA} \parallel \overline{RT}, \overline{AR} \parallel \overline{PT}$

32. right scalene 33. $m\angle R = 71 = m\angle I$

34. $\frac{y+5}{5}$ 35. -6 36. a. If $\frac{1}{x} > 0$, then $x > 0$.

b. If $\frac{1}{x} \leq 0$, then $x \leq 0$.

Chapters 1-10 1. $2\sqrt{15}$ 2. $1 < AB < 7$

3. $5\sqrt{2}$

50. $(x - 2)^2 + (y - 4)^2 = 25$ 51. $9\frac{3}{5}$ 52. $44\sqrt{2}$ 53. acute
 54. 72 55. $12\sqrt{2}$ 56. 3.0 57. 27 58. $A'(4, 3); B'(7, 6); C'(-2, 8)$ 59. 32, 53, 74 60. \overline{AB}
 61. Assume temp. that $m\angle E = m\angle G$.
 62. Subtraction Prop. of =

PREPARING FOR COLLEGE ENTRANCE EXAMS

Chapter 1 1. B 2. B 3. A 4. B 5. C
6. E 7. D

Chapter 2 1. B 2. E 3. B 4. C 5. C
6. A

Chapter 3 1. D 2. D 3. B 4. D 5. A
6. D 7. D 8. C

Chapter 4 1. B 2. A 3. D 4. D 5. E
6. B

Chapter 5 1. D 2. C 3. A 4. A 5. B
6. C 7. C

Chapter 6 1. C 2. D 3. C 4. A 5. A
6. C 7. B

Chapter 7 1. D 2. A 3. C 4. E 5. E
6. A