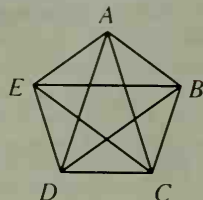


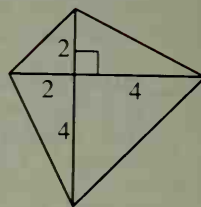
Written Exercises, Pages 107-109

1. 256, 1024 3. $\frac{1}{81}, \frac{1}{243}$ 5. 17, 23 7. 15, 4 9. 500, 250 11. none 13. none
 15. $1234 \times 9 + 5 = 11111$ 17. $9999^2 = 99980001$
 21. True.



Given: $ABCDE$ is a reg. pentagon.
 Prove: $\overline{AC} \cong \overline{AD} \cong \overline{BE} \cong \overline{BD} \cong \overline{CE}$

23. False.



27. a. Opp. \angle s are \cong . b. If both pairs of opp. \angle s of a quad. are \cong , then opp. sides are \parallel . Given: $ABCD$ is a quad.; $m\angle A = m\angle C$; $m\angle B = m\angle D$ Prove: $\overline{AD} \parallel \overline{BC}$; $\overline{AB} \parallel \overline{CD}$ Proof: 1. $m\angle A + m\angle B + m\angle C + m\angle D = 360$ (The sum of the meas. of the int. \angle s of a quad. is 360.) 2. $m\angle A = m\angle C$; $m\angle D = m\angle B$ (Given) 3. $2m\angle A + 2m\angle B = 360$; $2m\angle B + 2m\angle C = 360$ (Substitution Prop.) 4. $m\angle A + m\angle B = 180$; $m\angle B + m\angle C = 180$ (Div. Prop. of $=$) 5. $\angle A$ and $\angle B$ are supp.; $\angle B$ and $\angle C$ are supp. (Def. of supp. \angle s) 6. $\overline{AD} \parallel \overline{BC}$; $\overline{AB} \parallel \overline{CD}$ (If 2 lines are cut by a trans. and s-s. int. \angle s are supp., then the lines are \parallel .) c. Both pairs of opp. \angle s of a quad. are \cong if and only if opp. sides are \parallel . 29. 5; 9; 14; 20; $\frac{n(n-3)}{2}$

Self-Test 2, Page 110

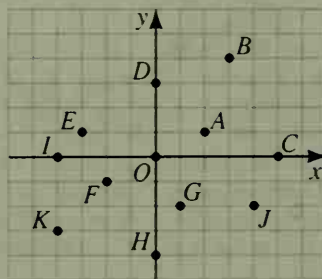
1. acute 2. scalene 3. 60 4. 105, 35 5. 19 6. $y = 50, z = 60$ 7. $x = 1, x = 7$ 8. 8
 9. equilateral, equiangular 10. 360, 144 11. 6, 60 12. 32 13. 32 14. 36 15. 16

Chapter Review, Pages 111-112

1. 2 3. alt. int. 5. 105, 105 7. $y = 20$ 9. \overline{DE} ; $\angle A$ is supp. to $\angle ADE$. 11. See page 85.
 13. 180 15. $\angle 3 \cong \angle 6$; If 2 \angle s are supp. of \cong \angle s, then the 2 \angle s are \cong . $\angle 2 \cong \angle 8$; If 2 \angle s of one \triangle are \cong to 2 \angle s of another \triangle , then the third \angle s are \cong . 17. 160 19. 12 21. $\frac{1}{100}, -\frac{1}{1000}$

Algebra Review, Page 113

1. 3 3. (0, 0) 5. (3, 5) 7. (4, 0) 9. (-5, 0) 11. (-2, 2) 13. (-2, -3) 15. K, O, S
 17. 3 19. M, N, P 21. V, W 23-34. 35. (2, 1) 37. (0, 3)
 39. (-4, -2)



Cumulative Review, Pages 114-115

1. sometimes 3. sometimes 5. always 7. 9. not possible 11. $x = 13$;
 $m\angle PQR = 156$

13. 15, 75, 90 15. 90 17. 90 19. 60 21. 60 23. False. If 2 lines are \parallel , then they do not intersect; true. 25. True. If an \angle is not obtuse, then it is acute; false. 27. Vert. \angle s are \cong .
 29. \angle Add. Post. 31. The meas. of an ext. \angle of a \triangle = the sum of the meas. of the 2 remote int. \angle s.
 33. The sum of the meas. of the \angle s of a \triangle is 180. 35. X 37. pentagon 39. \cong 41. biconditional
 43. 1080 45. 1. $\overline{WX} \perp \overline{XY}$ (Given) 2. $\angle 1$ is comp. to $\angle 2$. (If the ext. sides of adj. \angle s are \perp , then the \angle s are comp.) 3. $\angle 1$ is comp. to $\angle 3$. (Given) 4. $\angle 2 \cong \angle 3$ (Comps. of same \angle are \cong .)