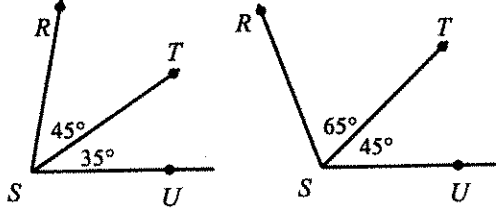


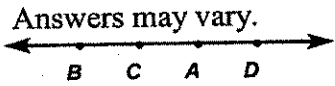
RUGGLES

Answers will vary. For example,



[1] \_\_\_\_\_

[2] deductive



[3] \_\_\_\_\_

[4]  $2\sqrt{10}$

[5] False

[6] [A]

[7] Area: 113.04, Circumference: 37.68

If a ray divides an angle into two congruent angles, it bisects the angle.

True

Biconditional: A ray bisects an angle if and only if it divides the angle into two congruent

[8] angles.

Statements	Reasons
$m\angle 1 = m\angle 3$	Given
$m\angle 1 + m\angle 2 = m\angle 3 + m\angle 2$	Addition prop. of equality
$m\angle 1 + m\angle 2 = m\angle AFC, m\angle 3 + m\angle 2 = m\angle DFB$	Angle addition prop.
$m\angle AFC = m\angle DFB$	Substitution prop.

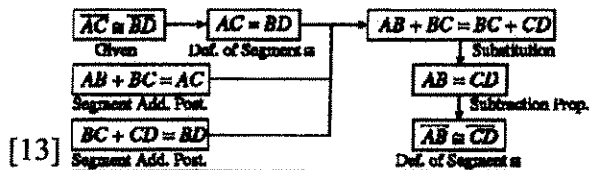
[9]

Statements	Reasons
$l \perp n, m \perp n, \angle ABJ \cong \angle KHL$	Given
$\angle ABJ$ is a right angle.	Definition of perpendicular
$\angle DCH$ is a right angle.	Definition of perpendicular
$\angle ABJ \cong \angle DCH$	Right Angle Congruence Theorem
$\angle DCH \cong \angle KHL$	Substitution

[10]

[11] Answers may vary. Example:  $KLV$  and  $SMN$

[12] Skew lines are lines that do not lie in the same plane.



[14]  $\angle HBF$  and  $\angle AED$  are alternate exterior angles.

[15]  $n \parallel p$

---

[16] [A] \_\_\_\_\_

---

[17] [B] \_\_\_\_\_

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[18]  $127^\circ$  \_\_\_\_\_

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[19] Equilateral, since  $\overline{AB} \cong \overline{CA} \cong \overline{BC}$ . \_\_\_\_\_

---

[20] All are possible. Sketches vary. \_\_\_\_\_

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[21] [A] \_\_\_\_\_

---

$\angle BEC \cong \angle DEA$  by vertical angles.  $\triangle BEC \cong \triangle DEA$  by AAS. Then, because corresponding parts of congruent triangles are congruent,

$\overline{BE} \cong \overline{DE}$ , and  $\overline{AE} \cong \overline{CE}$ .  $\angle BEA \cong \angle DEC$  by vertical angles,

[22] so  $\triangle BEA \cong \triangle DEC$  by SAS. \_\_\_\_\_

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- |  |   |
|--|---|
| 1. $\overline{QN} \cong \overline{QO}$ | 1. Given  |
| 2. $\angle QNO \cong \angle QON$       | 2. If 2 sides of a $\Delta$ are $\cong$ , the $\angle$ s opp. are $\cong$ . |
| 3. $\angle QNM \cong \angle QOP$       | 3. If $\angle$ s are supp. to $\cong \angle$ s, they are $\cong$ .          |
| 4. $\overline{NM} \cong \overline{OP}$ | 4. Given  |
| 5. $\triangle QNM \cong \triangle QOP$ | 5. SAS Congruenc Postulate  |
| 6. $\overline{QM} \cong \overline{QP}$ | 6. Corresponding Parts of Congruent Triangles are Congruent                 |
| [23] 7. $\triangle QMP$ is isosceles   | 7. If at least 2 sides of a $\Delta$ are $\cong$ , the $\Delta$ is isosc.   |
-

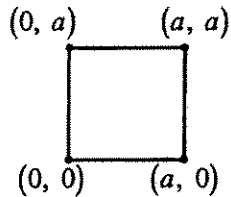
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[24] [C] \_\_\_\_\_

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[25] [B] \_\_\_\_\_

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The lengths of the diagonals are  $\sqrt{a^2 + (-a)^2} = a\sqrt{2}$  and  $\sqrt{a^2 + a^2} = a\sqrt{2}$ , so they are congruent. The slopes are  $\frac{a}{-a} = -1$ , and  $\frac{a}{a} = 1$ . Since the product of the slopes of the  
[26] diagonals is  $-1$ , the diagonals are perpendicular.

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$LO = 4, MN = 6; \triangle LNO \cong \triangle MNO$  by SAS, so corresp. parts of congruent triangles are  
[27] congruent.

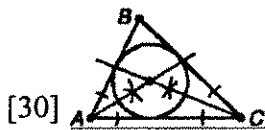
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[28] Circumcenter \_\_\_\_\_

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[29]  $RS = 8, UT = 5$  \_\_\_\_\_

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[30] \_\_\_\_\_

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[31]  $\overline{BF}$  \_\_\_\_\_

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[32] [D]

---

[33] A right triangle

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[34] [A]

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[35]  $\angle C$

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[36] [A]

---

[37] [C]

---

[38] 5

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[39]  $x = 108, y = 72$

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[40] A.  $112^\circ$  B. 19 C.  $68^\circ$  D. 34

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1. $\overline{SV} \cong \overline{TU}$ and $\overline{SV} \parallel \overline{TU}$	1. Given
2. $STUV$ is a parallelogram	2. If one pair of opp. sides of a quad. are both $\parallel$ and $\cong$ , then the quad. is a parallelogram.
3. $VX = XT$	3. The diagonals of a parallelogram bisect each other.

[41] \_\_\_\_\_

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[42] A rectangle

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[43] [C]

---

[44]  $\frac{1}{2}$

---

[45] an isosceles trapezoid

---

[46] 21

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[47] [A]

---

[48]  $294 \text{ cm}^2$

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[49] A.  $5\sqrt{5}$  units B.  $160\sqrt{5}$  sq. units

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[50] 513 sq. units

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