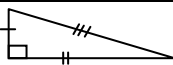


GEOMETRY Unit 4 Review 2014-15 ANSWERS

1. Right, Obtuse, Acute, Equiangular $x = 11$, a right Δ	2. Isosceles, Scalene, Equilateral Isosceles Δ	3. $x = 9$	4. $x = 4$
5. $x = 26$	6. $x = 10$ $y = 71$	7. $m\angle B = 54$ and $DF = 21$	
8. $x = 25$	9. a-4 b-2 c-5 d-1 e-3	10. Example: 	

11. $r_{\overline{MR}}(\Delta NQM)$

1. ΔMNP is isosceles w/base \overline{NP}	1. Given
2. $\overline{MN} \cong \overline{MP}$	2. The legs of an isosceles Δ are \cong
3. \overline{MR} bisects \overline{NP} at Q	3. Given
4. Q is the midpoint of \overline{NP}	4. segment bisector \rightarrow midpoint
5. $\overline{NQ} \cong \overline{PQ}$	5. midpoint $\rightarrow 2 \cong$ segments
6. $\overline{MQ} \cong \overline{MQ}$	6. reflexive property
7. $\Delta NQM \cong \Delta PQM$	7. SSS \cong SSS (Steps 2, 5, 6) $\rightarrow \cong \Delta$ s
8. $\angle NQM \cong \angle PQM$	8. CPCTC

12. Example: $r_{\overline{AB}}(R_C, m\angle BCA(\Delta ACE))$

1. $\angle E \cong \angle D$	1. Given
2. $\angle ACE \cong \angle BCD$	2. vertical angles are \cong
3. $\overline{AC} \cong \overline{BC}$	3. given
4. $\Delta ACE \cong \Delta BCD$	4. AAS \cong AAS (Steps 1, 2, 3) $\rightarrow \cong \Delta$ s
5. $\overline{AE} \cong \overline{BD}$	5. CPCTC

13. $r_{\overline{PX}}(R_P, m\angle XPY(\Delta PWX))$ or a reflection of ΔPWX into the line made by point P and the midpoint of \overline{WZ}

1. ΔWPZ is isosceles w/base \overline{WZ}	1. given
2. $\overline{WP} \cong \overline{ZP}$	2. The legs of an isosceles Δ are \cong
3. $\angle W \cong \angle Z$	3. In a Δ , \angle s opposite \cong sides are \cong
4. $\overline{WX} \cong \overline{ZX}$	4. Given
5. $\overline{XY} \cong \overline{XY}$	5. Reflexive
6. $\overline{WY} \cong \overline{ZY}$	6. common segments theorem
7. $\Delta WPY \cong \Delta ZPX$	7. SAS \cong SAS (Steps 2, 3, 6) $\rightarrow \cong \Delta$ s
8. $\angle WPY \cong \angle ZPX$	8. CPCTC

14. Example: $r_{\overline{DE}}(T_{\overline{CD}}(\Delta CFE))$

1. $\overline{CF} \cong \overline{DE}$ $\overline{CF} \perp \overline{FE}$ $\overline{DE} \perp \overline{FE}$	1. Given
2. $\overline{CF} \perp \overline{FE}$ $\overline{DE} \perp \overline{FE}$	2. Given
3. $\angle CFE$ is a right \angle , $\angle DEF$ is a right \angle	3. \perp lines \rightarrow right \angle s
4. $\angle CFE \cong \angle DEF$	4. all right \angle s are \cong
5. $\overline{FE} \cong \overline{FE}$	5. reflexive property
6. $\Delta CFE \cong \Delta DEF$	6. SAS \cong SAS (Steps 1, 4, 5) $\rightarrow \cong \Delta$ s
7. $\angle C \cong \angle D$	7. CPCTC

15. $r_{\overline{MO}}(\Delta MON)$

1. $\overline{MO} \perp \overline{NP}$	1. given
2. $\sphericalangle NOM$ is a right \sphericalangle , $\sphericalangle POM$ is a right \sphericalangle	2. \perp lines \rightarrow right \sphericalangle s
3. ΔNOM is a right Δ , ΔPOM is a right Δ	3. a Δ w/1 right \sphericalangle is a right Δ
4. $\overline{MN} \cong \overline{MP}$	4. Given
5. $\overline{MO} \cong \overline{MO}$	5. reflexive property
6. $\Delta MNO \cong \Delta MPO$	6. $R_{\Delta}HL \cong R_{\Delta}HL$ (steps 3, 4, 5) $\rightarrow \cong \Delta$ s
7. $\overline{NO} \cong \overline{PO}$	7. CPCTC

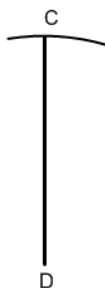
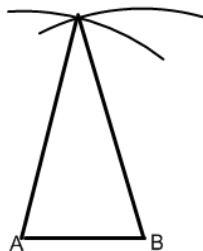
16.

Algebraic Work:	Concluding Statements
$D(3,0)$ $m_{\overline{BD}} = \text{undefined}$ $m_{\overline{CD}} = 0$	Since the slope of \overline{BD} is undefined, it is a vertical line. And, since the slope of \overline{CD} is 0 it is a horizontal line. Therefore $\overline{BD} \perp \overline{CD}$. Since \perp lines form right \sphericalangle s, then $\sphericalangle BDC$ is a right \sphericalangle and ΔBDC is a right Δ by definition.

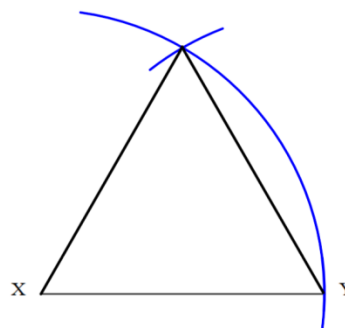
17.

Algebraic Work:	Concluding Statements
$AB = 2\sqrt{13}$ $BC = 2\sqrt{13}$ $AC = 8$	Since $AB = 2\sqrt{13} = BC$, then $\overline{AB} \cong \overline{BC}$. Therefore, since at least two sides of ΔABC are \cong , then it is an isosceles Δ by definition.

18.



19.



20.

