Answer Key

Lesson 3.6

Challenge Practice

1.	
Statements	Reasons
1. $\angle TZY \cong \angle XZY$	1. Given
2. \angle <i>TZY</i> and \angle <i>XZY</i> are	2. Def. of linear pair
a linear pair.	
3. $\overline{VY} \perp \overline{TX}$	3. Theorem 3.8
4. $\angle VZX$ is a right angle.	4. Def. of \perp lines
5. $\angle VZW$ and $\angle WZX$	5. Theorem 3.10
are complementary.	
2.	
Statements	Reasons
1. $\angle 1$ and $\angle 2$ are	1. Given
complementary,	
$\angle 1$ and $\angle 4$ are	
complementary,	
$\angle 3$ and $\angle 4$ are	
complementary.	
2. $\angle 2$ and $\angle 4$ are	2. Congruent
complementary.	Complements Thm.
3. $\angle 2$ and $\angle 3$ are	3. Congruent
complementary.	Complements Thm.
4. $m \angle 2 + m \angle 3 = 90^{\circ}$	4. Definition of
	complementary
	angles
5. $\frac{MOP}{MO}$ is a right angle.	5. Def. of right angle
$0. MO \perp OP \qquad $	6. Def. of \perp lines
3.	D
Statements	Reasons
1. $m \perp n$	1. Given
2. $\angle 3$ and $\angle 6$ are	2. Theorem 3.10
complementary.	
3. $\angle 3$ and $\angle 4$ are	3. Given
complementary.	
$4. \angle 4 \cong \angle 6$	4. Congruent
5 ($1 \sim 15$	5 Vertical Angles
$5. \angle 4 = \angle 5$	5. Vertical Angles
6 15 ~ 16	6 Transitiva Proparty
0.25 = 20	of Congruence
4	or congruence
Statements	Reasons
$\frac{1}{1} \frac{1}{i} \frac{1}$	1 Giuan
1. $j \perp 1, \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	$\begin{array}{c} 1.01 \\ 2.7 \\ 1.01 \\ 2.7 \\ 1.01 \\ 2.10 \\ \mathbf$
$= m \angle 2 + m \angle 3 = 90$	

Answer Key

3. $m \angle 1 = m \angle 3$	3. Definition of
4 $m/2 + m/1 = 90^{\circ}$	congruent angles 4 Substitution Prop
	of Equality
5. $m \angle BED$ is a rt. angle.	5. Def. of right angle
6. $k \perp m$	6. Def. of \perp lines
5. $\frac{7}{5}$ 6. $\frac{5}{\sqrt{2}}$ 7. $\frac{9}{\sqrt{5}}$ 8. $\frac{8}{\sqrt{34}}$	