

	Statement	Justification
1.	If $BH \perp DC$ , then $\angle DCH$ is a right angle.	Definition of Perpendicular Lines
2.	$FC + CG = FG$ .	Segment Addition Postulate
3.	If $C$ is the midpoint of $FG$ , then $FC = CG$ .	Definition of a Midpoint
4.	$m\angle BCG + m\angle GCH = 180$ .	Definition of Supplementary Angles OR Angle Addition Postulate
5.	If $\angle DCH$ is a right angle, then $m\angle DCH = 90$ .	Definition of a Right Angle
6.	$m\angle DCG + m\angle GCH = m\angle DCH$ .	Angle Addition Postulate
7.	If $\angle BCD$ is a right angle, then $BH \perp DC$ .	Definition of Perpendicular Lines
8.	If $C$ is the midpoint of $FG$ , then $FC = \frac{1}{2}FG$ .	Midpoint Theorem
9.	If $\angle 3$ and $\angle 1$ are complementary angles, then $m\angle 3 + m\angle 1 = 90$ .	Definition of Complementary Angles
10.	$\angle BCF \cong \angle GCH$	Vertical Angles are Congruent OR Vertical Angle Theorem.
11.	If $m\angle 1 = m\angle 2$ and $m\angle 2 = m\angle 3$ , then $m\angle 1 = m\angle 3$ .	Substitution OR Transitive
12.	If $m\angle BCF + m\angle FCH = m\angle FCH + m\angle HCG$ , then $m\angle BCF = m\angle HCG$ .	Subtraction
13.	If $CG$ bisects $\angle DCH$ , then $\angle DCG \cong \angle GCH$	Definition of an Angle Bisector
14.	If $m\angle DCG + m\angle FCH = 180$ , then $\angle DCG$ and $\angle FCH$ are supplementary angles.	Definition of Supplementary Angles
15.	If $CG$ bisects $\angle DCH$ , then $m\angle DCG = \frac{1}{2}m\angle DCH$ .	Angle Bisector Theorem

**Station 2** 1.  $x = 7$   $FG = 21$   $DF = 13$   $DG = 34$

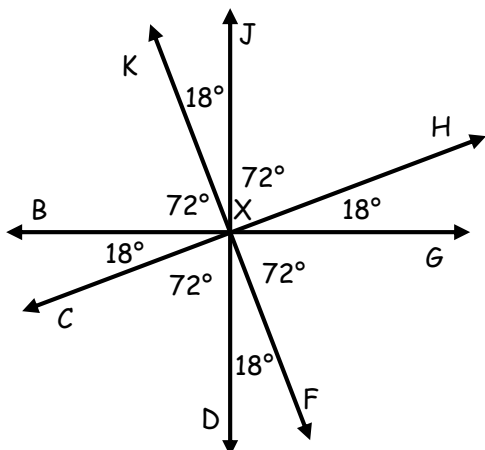
2.  $x = 3$   $m\angle LNP = 136$   $m\angle MNL = 44$   $m\angle MNP = 180$

3.  $x = 10$   $m\angle MKL = 70$   $m\angle JKM = 20$   $m\angle JKL = 90$

4.  $x = 8$   $m\angle TSP = 51$   $m\angle RSP = 129$   $m\angle QSR = 51$   $m\angle QST = 129$

**Station 3**

Given:  $KF \perp CH$ ;  $JD \perp BG$ ;  $m\angle BXK = 72$



Find each angle measure:

1.)  $m\angle KXJ = 18$

2.)  $m\angle JXH = 72$

3.)  $m\angle HXG = 18$

4.)  $m\angle GXF = 72$

5.)  $m\angle FXD = 18$

6.)  $m\angle DXC = 72$

7.)  $m\angle CXB = 18$

8.)  $m\angle KXH = 90$

9.)  $m\angle KXF = 180$

10.)  $m\angle FXH = 90$

11.)  $m\angle CXJ = 108$

12.)  $m\angle JXF = 162$

13.)  $m\angle GXC = 162$

14.)  $m\angle CXH = 180$

15.)  $m\angle FXB = 108$

16.)  $m\angle KXD = 162$

17.)  $m\angle DXH = 108$

18.)  $m\angle CXF = 90$

19.)  $m\angle CXH = 180$

20.)  $m\angle BXJ = 90$

<b>Station 4</b>		2.	
Statements	Reasons	Statements	Reasons
1. $WE = ST$	1. Given	1. $AB = BD; BC = BD$	1. Given
2. $WE + ES = ST + ES$	2. Addition Property	2. $AB = BC$	2. Substitution
3. $WE + ES = WS$ $ST + ES = ET$	3. Segment Addition Postulate	3. B is the midpoint of AC	3. Definition of a midpoint
4. $WS = ET$	4. Substitution		

<b>Station 5</b>		2.	
Statements	Reasons	Statements	Reasons
1. $4x + 3y = 2x + 1; y = -2$	1. Given	1. $\angle 1$ and $\angle 3$ are complementary	1. Given
2. $4x + -6 = 2x + 1$	2. Substitution	2. $m\angle 1 + m\angle 3 = 90$	2. Definition of Complementary Angles
3. $2x - 6 = 1$	3. Subtraction	3. $m\angle 1 = m\angle 2$	3. Vertical Angles are Congruent
4. $2x = 7$	4. Addition	4. $m\angle 2 + m\angle 3 = 90$	4. Substitution
5. $x = 3.5$	5. Division	5. $m\angle 2 + m\angle 3 = m\angle DCH$	5. Angle Addition Postulate
		6. $m\angle DCH = 90$	6. Substitution
		7. $\angle DCH$ is a right angle	7. Definition of a Right Angle
		8. $BH \perp DC$	8. Definition of Perpendicular Lines

<b>Station 6</b>		2.	
Statements	Reasons	Statements	Reasons
1. $BC \perp FD$	1. Given	1. $\angle 2 \cong \angle 3$	1. Given
2. $\angle BCD$ is a right angle	2. Definition of Perpendicular Lines	2. $\angle 3 \cong \angle 4$	2. Vertical Angles are Congruent
3. $m\angle BCD = 90$	3. Definition of a right angle	3. $\angle 2 \cong \angle 4$	3. Substitution
4. $m\angle BCF + m\angle FCD = m\angle BCD$	4. Angle Addition Postulate	4. $\angle 4 \cong \angle 5$	4. Given.
5. $m\angle BCF + m\angle FCD = 90$	5. Substitution	5. $\angle 2 \cong \angle 5$	5. Substitution
6. $\angle BCF$ and $\angle FCD$ are complementary	6. Definition of Complementary Angles		