Honors Geometry Name _____

Unit 1 – Worksheet 6 Date _____ Period _____

Identify each property below.

	EXAMPLE	PROPERTY SHOWN
1	$\overline{DY} \cong \overline{DY}$	
2	If $a = b$, then $6a = 6b$	
3	If $4 = AB$, then $4 - AC = AB - AC$	
4	If $RD = 2$ and $RD + 8 = XR$, then $2 + 8 = XR$	
5	If $2a = 10$, then $a = 5$	
6	If $AX = 8$, then $8 = AX$	
7	If $\overline{DE} \cong \overline{XY}$ and $\overline{XY} \cong \overline{ML}$, then $\overline{DE} \cong \overline{ML}$	
8	If $AB = CE$, then $AB + XY = CE + XY$	
9	MR = MR	
10	If $\overline{RL} \cong \overline{TS}$, then $\overline{TS} \cong \overline{RL}$	
11	If $CA + 5 = 7$, then $CA = 2$	
12	If $MA = RC$ and $RC = 7$, then $MA = 7$	
13	If $XY = 10$ and $AB + XY = 15$, then $AB + 10 = 15$	
14	If $3x + 6 = 18$, then $x + 2 = 6$	
15	If $XY + AB = DE$ and $DE = 3$, then $XY + AB = 3$	

Use the properties you've reviewed to complete the 2-column algebraic proofs below.

16. Prove that if $3x-8=1$, then $x=3$.

Given:

Prove:

Statements	Reasons

17. Prove that if $5=2-\frac{1}{2}x$, then $x=-6$.

Given:

Prove:

Statements	Reasons

18. Prove that if $3(2x-5)=40$, then $x=\frac{55}{6}$.

Given:

Prove:

Statements	Reasons

19. Prove that if $32=28x+4$, then $\frac{1}{3}x=\frac{1}{3}$.

Given:

Prove:

Statements	Reasons