Geometry
2.5 Extra Practice

Name: _____
Date: _____ Period: _____

Name the property of equality the statement illustrates.

1. _____ If *A*, *B*, and *C* are collinear, then $AC = AB + BC$.

2. _____ $m\angle 4 = m\angle 8$ and $m\angle 8 = m\angle 10$, then $m\angle 4 = m\angle 10$.

3. _____ $GE = OM$, then $OM = GE$.

4. _____ If $AB = CD$, then $AB - EF = CD - EF$

5. _____ If $WX = YZ$, then $YZ = WX$.

6. _____ If $m\angle D = m\angle E$ and $m\angle E = 45°$, then m $\angle D = 45°$.

Use the property to complete the statement.

7. Reflexive Property of Angle Measure: $m\angle C$ = _____

8. Transitive Property of Equality: If $CD = GH$ and $GH = RS$, then _____

9. Addition Property of Equality: If $x = 5$, then $14 + x$ = _____

10. Symmetric Property of Equality: If $BC = RL$, then _____

11. Substitution Property of Equality: If $m\angle B = 15°$, then $3(m\angle B)$ = _____

Solve the equation. Write a reason for each step.

12. $3x + 8 = 14$

_____

_____

13. $-12x = 28 - 16x$

_____

_____

14. $7(x - 11) = 12x - 122$

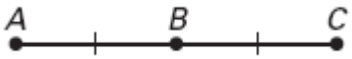
_____

_____

_____

_____

Complete the logical argument by giving a reason for each step.



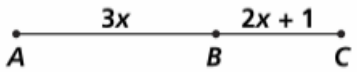
1. $AB = BC$ Given

$AC = AB + BC$ **a.** _____.

$AC = AB + AB$ **b.** _____.

$AC = 2(AB)$ **c.** _____.

2. Given: $AC = 36$, $AB = 3x$, and $2x + 1 = BC$



$AC = 36$, $AB = 3x$, and $2x + 1 = BC$ **a.** _____.

$AB + BC = AC$ **b.** _____.

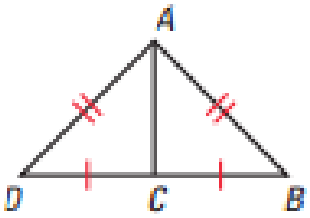
$3x + 2x + 1 = 36$ **c.** _____.

$5x + 1 = 36$ **d.** _____.

$5x = 35$ **e.** _____.

$x = 7$ **f.** _____.

3. **Given** $AD = AB, DC = CB$
Show that the perimeter of ΔABC **is equal to the perimeter of** ΔABD**.**



$AD = AB, DC = CB$ **a.** _____.

$AC = AC$ **b.** _____.

$AD + DC + AC = AB + CB + AC$ **c.** _____.