

Name _____ HW # _____ Per _____ Col _____

Geometry Worksheet Section 2-5 and Algebra Review

Solve the equations. Fill in missing steps and justifications (reasons).

1. $3x - 5 = 10 - 2x$ Given

$5x - 5 = 10$ _____

$5x =$ _____

$x =$ _____

2. $180 - x = 3(90 - x)$ Given

$180 - x =$ _____

$180 + 2x =$ _____

$2x =$ _____

$x =$ _____

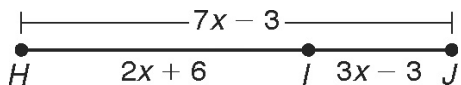
3. $\frac{1}{5}(a + 10) = -3$ Given

$\frac{1}{5}a + 2 = -3$ _____

$\frac{1}{5}a =$ _____

$a =$ _____

4. Complete the proof. Write a justification for each step.



$HJ = HI + IJ$ _____

$7x - 3 = (2x + 6) + (3x - 3)$ _____

$7x - 3 = 5x + 3$ _____

$7x = 5x + 6$ _____

$2x = 6$ _____

$x = 3$ _____

Identify the property that justifies each statement.

5. $m = n$, so $n = m$.

6. $\angle ABC \cong \angle ABC$

7. $\overline{KL} \cong \overline{LK}$

8. If $p = q$ and $q = -1$, then $p = -1$.

Solve each equation for x . Show all steps. Give answers in simplest form. No decimals.

9. $4 + 5x = x - 8$

10. $3(x - 2) = 5(4 + x)$

11. $3(x + 4) = 3(8 - 2x)$

12. $-4(3 - x) + 6 = 2(x - 3)$

13. $2(x + 1) = 4 - 3(2x + 1)$

14. $6(2x - 1) + 3 = 6(2 - x) - 1$

15. $5x - 2(3 - x) = -(4 - x)$

16. $\frac{2}{3}x - 1 = x + 7$