Name _____ Date _____ Class _____

LESSON 2-5

Practice B

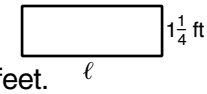
Algebraic Proof

Solve each equation. Show all your steps and write a justification for each step.

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

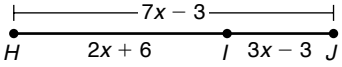
2. $t + 6.5 = 3t - 1.3$

3. The formula for the perimeter P of a rectangle with length ℓ and width w is $P = 2(\ell + w)$. Find the length of the rectangle shown here if the perimeter is $9\frac{1}{2}$ feet. Solve the equation for ℓ and justify each step.



Write a justification for each step.

4.



$HJ = HI + IJ$ _____

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

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

$7x = 5x + 6$ _____

$2x = 6$ _____

$x = 3$ _____

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. $p = q$ and $q = -1$, so $p = -1$.

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