

PROBLEM 2 Simplifying Expressions

1. Each expression has been simplified or solved one step at a time. Next to each step, identify the property, transformation, or simplification used in the step.

a. $4 + 5(x + 7)$

$4 + (5x + 35)$

$5x + 4 + 35$

$5x + (4 + 35)$

$5x + 39$

b. $7x + 4 - 3(2x - 7)$

$7x + 4 - 6x + 21$

$7x - 6x + 4 + 21$

$(7x - 6x) + (4 + 21)$

$x + 25$

c. $4(x + 3) - 5(x - 2)$

$4(x + 3) - 5x + 10$

$4x + 12 - 5x + 10$

$4x + -5x + 12 + 10$

$-x + 22$

Combining like terms is a justification you can use for a step.

