

Name \_\_\_\_\_ Hour \_\_\_\_\_

Write a reason for each statement or fill in the missing statement.

1. Given:  $7x - 11 = 4x + 19$

Prove:  $x = 10$

Statements	Reasons
$7x - 11 = 4x + 19$	
$3x - 11 = 19$	
$3x = 30$	
$x = 10$	

2. Given:  $4(3x + 6) - 7 = 5x - 32$

Prove:  $x = -7$

Statements	Reasons
$4(3x + 6) - 7 = 5x - 32$	
$12x + 24 - 7 = 5x - 32$	
$12x + 17 = 5x - 32$	
$7x + 17 = -32$	
$7x = -49$	
$x = -7$	

3. Given:  $\frac{1}{2}(6x + 18) = 24$

Prove:  $x = 5$

Statements	Reasons
	Given
	Distributive Property
	Subtraction Property
	Division Property

# Proofs #1

Write a reason for each statement or fill in the missing statement.

4. Given:  $2x - 15 - x = 21 + 10x$

Prove:  $x = -4$

Statements	Reasons
	Given
$x - 15 = 21 + 10x$	
$-15 = 21 + 9x$	
	Subtraction Property
$-4 = x$	

5. Given:  $3y - 19x = -15$ ,  $y = 7x - 9$

Prove:  $x = 6$

Statements	Reasons
$3y - 19x = -15$ , $y = 7x - 9$	
$3(7x - 9) - 19x = -15$	
	Distributive Property
	Simplify
$2x = 12$	