

## Algebra I Worksheet #5 Unit 2 Selected Solutions

Complete the table for each input-output chart shown.

	4.	8.
Input	$4x + 6 = 22$	$2x - 7 = 15$
↓ First Operation	subtract 6 from both sides	add 7 to both sides
↓ Output	$4x = 16$	$2x = 22$
↓ Second Operation	divide both sides by 4	divide both sides by 2
↓ Output	$x = 4$	$x = 11$

Solve the following equations. Show your steps.

$$\begin{array}{r}
 15. \quad 9x + 15 = 33 \\
 \underline{-15 \quad -15} \\
 9x = 18 \\
 \underline{\quad \quad 9} \\
 x = 2
 \end{array}$$

$$\begin{array}{r}
 16. \quad 7x - 9 = 19 \\
 \underline{\quad \quad +9 \quad +9} \\
 7x = 28 \\
 \underline{\quad \quad 7} \\
 x = 4
 \end{array}$$

Write an algebraic expression for each of the following.

18. Billy and Brian have marbles. The number that Billy has is three times the number that Brian has. Let  $x$  represent the number of marbles that Brian has. Represent the number of marbles that Billy has in terms of  $x$ .  $3x$

19. Billy and Brian have marbles. The number that Billy has is five less than three times the number that Brian has. Let  $x$  represent the number of marbles that Brian has. Represent the number of marbles that Billy has in terms of  $x$ .  $3x - 5$