

Lesson 5.3 Writing Expressions

An **equation** is a number sentence that contains an equal sign.

An **expression** is a number phrase without an equal sign.

Equations and expressions may contain only numerals, or they also may contain variables. A

variable is a symbol, usually a letter, that stands for an unknown number.

	<i>Equation</i>	<i>Expression</i>
Numerical	$3 \times 5 = 15$	$9 + 2$
Variable	$2n + 2 = 18$	$a - 5$

All equations and expressions express an idea.

3×4 means "three 4s." $6 \div 3 = 2$ means "6 divided by 3 is 2."

$n - 7$ means " n decreased by 7" or "a number decreased by 7."

$4n + 2 = 6$ means "four times a number, plus 2, is 6" or "4ns, plus 2, is 6."

Translate each phrase into an expression or an equation.

a

b

- | | |
|-------------------------------------|---------------------------------|
| 1. x increased by 5 _____ | 12 divided by a number _____ |
| 2. seven ns _____ | c less than 7 _____ |
| 3. a number added to 15 is 23 _____ | one-fourth of x _____ |
| 4. p added to 6 _____ | the product of 15 and m _____ |

Translate each sentence into an equation. Use n for an unknown number.

5. 11 decreased by a number is 7. _____
6. 8 times a number, plus 4, is 84. _____
7. A number divided by 5 is 6. _____

Write each expression in words.

8. $n - 5$ _____
9. $3n \div 6$ _____