

Solve the equations below and write the algebraic steps.
The first one is done for you.

$$1 \quad 5n - 5 = 15$$

$$5n - 5 + 5 = 15 + 5$$

$$5n = 20$$

$$5n \div 5 = 20 \div 5$$

$$n = 4$$

$$2 \quad 2n + 6 = 18$$

$$2n + 6 + 6 = 18 + 6$$

$$2n = 24$$

$$2n \div 2 = 24 \div 2$$

$$n = 12$$

$$3 \quad 5n + 4 = 24$$

$$5n + 4 + 4 = 24 + 4$$

$$5n = 28$$

$$5n \div 5 = 28 \div 5$$

$$n = 5.6$$

$$4 \quad 2a - 1 = 7$$

$$2a - 1 + 1 = 7 + 1$$

$$2a = 8$$

$$2a \div 2 = 8 \div 2$$

$$a = 4$$

$$5 \quad 4n + 3 = 11$$

$$4n + 3 + 3 = 11 + 3$$

$$4n = 14$$

$$4n \div 4 = 14 \div 4$$

$$n = 3.5$$

$$6 \quad 8n - 7 = 33$$

$$8n - 7 + 7 = 33 + 7$$

$$8n = 40$$

$$8n \div 8 = 40 \div 8$$

$$n = 5$$

$$7 \quad 10n + 9 = 89$$

$$10n + 9 - 9 = 89 - 9$$

$$10n = 80$$

$$10n \div 10 = 80 \div 10$$

$$n = 8$$

$$8 \quad 5n + 1 = 26$$

$$5n + 1 - 1 = 26 - 1$$

$$5n = 25$$

$$5n \div 5 = 25 \div 5$$

$$n = 5$$

$$9 \quad 6a - 7 = 53$$

$$6a - 7 + 7 = 53 + 7$$

$$6a = 60$$

$$6a \div 6 = 60 \div 6$$

$$a = 10$$

$$10 \quad 9b + 15 = 60$$

$$9b + 15 - 15 = 60 - 15$$

$$9b = 45$$

$$9b \div 9 = 45 \div 9$$

$$b = 5$$

$$11 \quad 5d - 6 = 24$$

$$5d - 6 + 6 = 24 + 6$$

$$5d = 30$$

$$5d \div 5 = 30 \div 5$$

$$d = 6$$

$$12 \quad 9n + 12 = 30$$

$$9n + 12 - 12 = 30 - 12$$

$$9n = 18$$

$$9n \div 9 = 18 \div 9$$

$$n = 2$$

$$1. 5n = 20$$

$$n = 4$$

$$2. 2n = 24$$

$$n = 12$$

$$3. 5n = 28$$

$$n = 5.6$$

$$4. 2a = 8$$

$$a = 4$$

$$5. 4n = 14$$

$$n = 3.5$$

$$6. 8n = 40$$

$$n = 5$$

$$7. 8R = 80$$

$$R = 10$$

$$8. n = 7$$

$$9. a = 10$$

$$10. b = 5$$

$$11. d = 6$$

$$12. n = 2$$

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Substitution

Instructions: Evaluate each expression by substituting in the given values.

1. If $x = 3$, then what is $x + 4$? $3 + 4 = 7$

2. If $x = -5$, then what is $10 + x$? $10 + (-5) = 5$

3. If $x = 7$, then what is $x - 8$? $7 - 8 = -1$

4. If $x = -6$, then what is $18 - x$? $18 - (-6) = 24$

5. If $x = 2$, then what is $4x$? $4 \times 2 = 8$

6. If $x = 9$, then what is $-8x$? $-8 \times 9 = -72$

7. If $x = 7$, then what is $\frac{35}{x}$? $35 \div 7 = 5$

8. If $x = 27$, then what is $-\frac{x}{3}$? $-(27 \div 3) = -9$

9. If $a = 3$, $b = 5$, then what is $2a + b$? $2 \times 3 + 5 = 11$

10. If $a = -1$, $b = -4$, then what is $a - b$? $-1 - (-4) = 3$