What Is Solving and Explaining Two-Step Equations Involving Whole Numbers and Using Inverse Operations?

- An algebraic equation is an expression in which a letter represents an unknown number such as, n + 5 = 11 (n = 6).
- An inverse operation is one that “undoes” or reverses another. Addition and subtraction are inverse operations, and so are multiplication and division.
- Using an inverse operation allows us to calculate the value of the unknown number by moving all the known numbers to one side of the e
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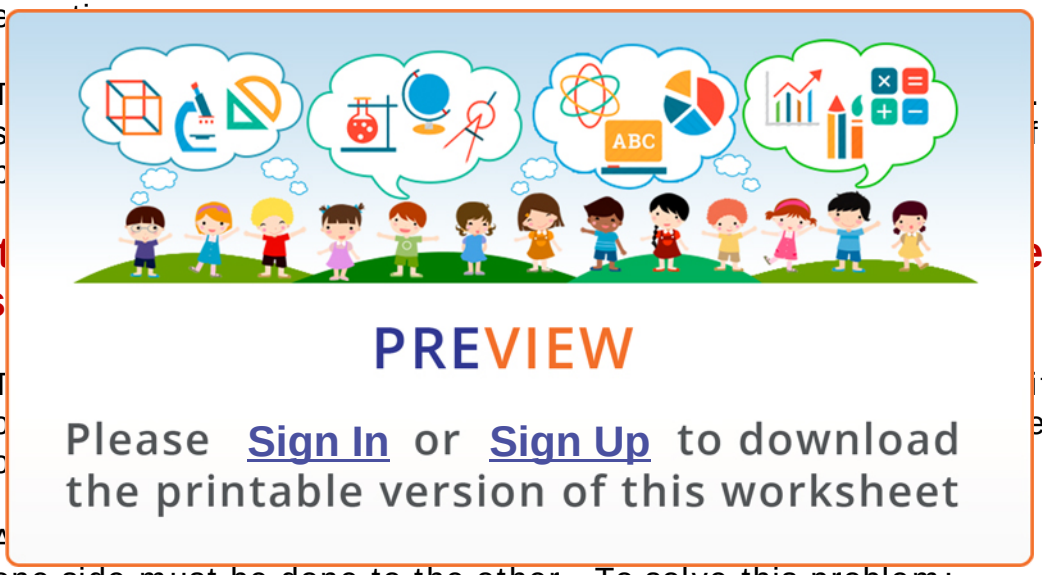
- A to one side must be done to the other. To solve this problem:
    - **n – 6 = 4**
    - Add 6 to both sides of the equation because addition is the inverse of subtraction
    - **n = 10**.



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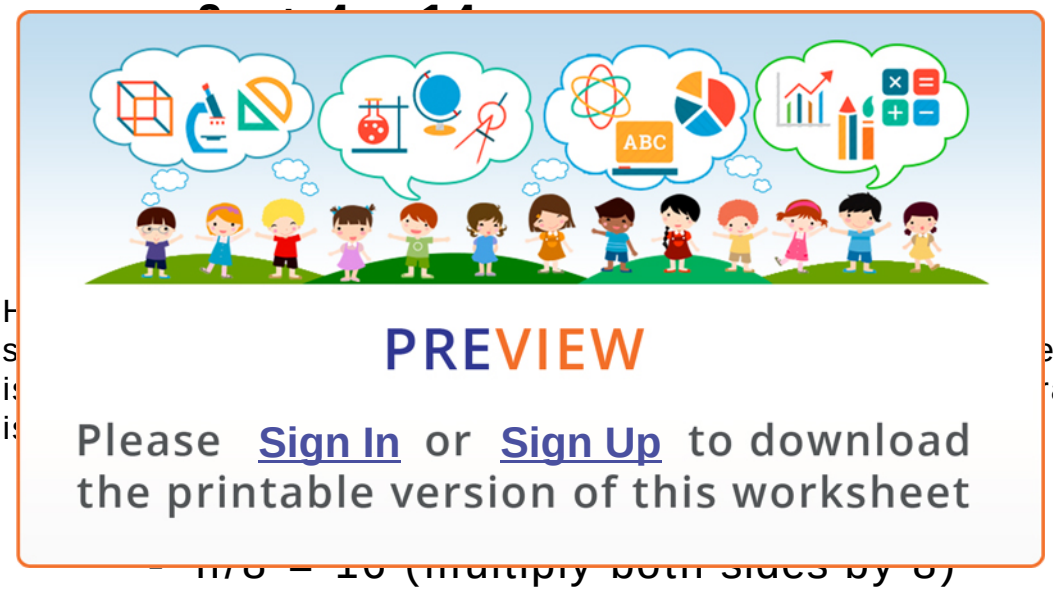
- Just as addition and subtraction are inverse operations, so are multiplication and division. To solve this problem:

  - **6n = 30**
  - Divide both sides of the equation by 6 because division is the inverse of multiplication
  - **n = 5.**

- When solving two-step equations, first add or subtract both sides using the inverse operation of the one in the equation. **Addition and subtraction are ALWAYS done first.**



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  - n/3 = 16 (multiply both sides by 3)
  - **n = 128**

  - **5n + 5 = 20** (subtract 5 from both sides)
  - 5n = 15 (divide both sides by 5)
  - **n = 3**

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$12n - 5 = 31$

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$n/7 + 5 = 31$

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$9n +$

PREVIEW

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$n/6 -$

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$3n - 14 = 16$

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