Lesson 3.2 Solving Problems with Equivalent Expressions

Sometimes, it is easier to solve equations by writing them in different ways.

A number increased by 10% can be written as:

- $n + (0.10 \times n)$
- $1.10 \times n$

A number divided by 7 equals 3 can be written as:

- $n \div 7 = 3$
- $3 \times 7 = n$

Write two equivalent expressions for each statement.

a **b**

1. a number decreased by 7%

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_____

9 times the sum of 7 and a number

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_____

2. $25 plus a 5% tip

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_____

the sum of a number and 4 times the number

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_____

3. a number divided by 5 equals 9

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_____

a number increased by $\frac{1}{5}$

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_____

4. 12 times the difference of 15 and a number

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_____

$44 plus a 20% tip

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_____

5. the sum of 7 and a number times 10

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_____

a number decreased by $3\frac{1}{4}$

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