Name:

**1.3 Solving Linear Equations**

**Evaluate vs. Solve**

**Addition Property of Equality:**

**Subtraction Property of Equality:**

**Multiplication Property of Equality:**

**Division Property of Equality:**

**Each of the following proofs has the statements given. Use the properties found on page 5 and page 19 of your book to find the correct reason for each statement.**

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| 1.) | Given: x + 9 = 15  Prove: x = 14 | |  |  |  | | --- | --- | --- | |  | **Statement** | **Reason** | | 1.) | x + 9 = 15 |  | | 2.) | x + 9 – 9 = 15 – 9 |  | | 3.) | x + 0 = 15 – 9 |  | | 4.) | x + 0 = 6 | Simplify Like Terms | | 5.) | x = 6 |  | | 6.) | x = 6 |  | | 7.) | 1 x = 6 |  | | 8.) | 1 x = 14 | Simplify Like Terms | | 9.) | x = 14 |  | |
| 2.) | Given: 5(2x – 4) + 3 = 33  Prove: x = 5 | |  |  |  | | --- | --- | --- | |  | **Statement** | **Reason** | | 1.) | 5(2x – 4) + 3 = 33 |  | | 2.) | 10x – 20 + 3 = 33 |  | | 3.) | 10x – 17 = 33 | Simplify Like Terms | | 4.) | 10x – 17 + 17 = 33 + 17 |  | | 5.) | 10x + 0 = 33 + 17 |  | | 6.) | 10x + 0 = 50 | Simplify Like Terms | | 7.) | 10x = 50 |  | | 8.) | 10x = 50 |  | | 9.) | 1 · x = 50 |  | | 10.) | 1 · x = 5 | Simplify Like Terms | | 11.) | x = 5 |  | |