

**3.1 Solve Equations Involving Inverse Properties of Addition and Multiplication**

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**Answers**

1. 6	2. 3	3. 5	4. 2	5. 8
6. 3	7. 2	8. 5	9. 20	10. 6
11. 1	12. 11	13. 9	14. 15	15. 7

**3.2 Solve Equations Involving Inverse Properties of Addition and Division**

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**Answers**

1. 12	2. 10	3. 36	4. 234	5. 72
6. 108	7. 98	8. 77	9. 84	10. 28
11. 66	12. 8	13. 98	14. 120	15. 153

**3.3 Solve Equations Involving Inverse Properties of Subtraction and Multiplication**

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**Answers**

1. 4	2. 6	3. 6	4. 5
5. 6	6. 9	7. 13	8. 9
9. 6	10. 7	11. 12	12. 7
13. 3	14. 6	15. 2	16. 3

**3.4 Solve Equations Involving Inverse Properties of Subtraction and Division**

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**Answers**

1. 60	2. 66	3. 119	4. 128
5. 112	6. 58	7. 40	8. 63
9. 70	10. 64	11. 24	12. 91
13. 40	14. 104	15. 78	16. 54

**3.5 Solve Equations Involving Combining Like Terms**

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**Answers**

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|--------------|---------------|--------------|
| 1. $11x + 2$ | 2. $2y + 8$   | 3. $16x - 4$ |
| 4. $15x - 8$ | 5. $-8y + 16$ | 6. $9x - 1$  |
| 7. 2         | 8. 6          | 9. -5        |
| 10. -1       | 11. 2         | 12. 4        |
| 13. 7        | 14. -8        | 15. -5       |

**3.6 Solve Equations with the Distributive Property**

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**Answers**

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|--------|--------|-------|-------|---------|
| 1. 2   | 2. 1   | 3. 6  | 4. 5  | 5. 15   |
| 6. 9   | 7. -4  | 8. 3  | 9. 9  | 10. -12 |
| 11. -4 | 12. -1 | 13. 8 | 14. 6 | 15. -1  |

**3.7 Solve Equations with the Distributive Property and Combining Like Terms**

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**Answers**

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|-------|--------|-------|-------|-------|
| 1. 4  | 2. 2   | 3. 2  | 4. 4  | 5. 9  |
| 6. 2  | 7. 10  | 8. 9  | 9. -5 | 10. 6 |
| 11. 3 | 12. -6 | 13. 9 | 14. 3 | 15. 4 |

**3.8 Solve Equations with Variables on Both Sides**

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**Answers**

- |       |       |        |        |         |         |
|-------|-------|--------|--------|---------|---------|
| 1. 4  | 2. 6  | 3. -6  | 4. -10 | 5. 8    | 6. -3   |
| 7. -2 | 8. 6  | 9. -10 | 10. -2 | 11. -2  | 12. 2   |
| 13. 3 | 14. 2 | 15. -2 | 16. 4  | 17. -11 | 18. -12 |
| 19. 1 | 20. 1 | 21. -3 | 22. -4 |         |         |

**3.9 Solve Multi- Step Equations Involving Decimals**

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**Answers**

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|-------|---------|----------|--------|--------|
| 1. 4  | 2. 20   | 3. 120   | 4. 9   | 5. 90  |
| 6. 30 | 7. 3    | 8. 3     | 9. 5   | 10. 6  |
| 11. 4 | 12. .48 | 13. 2.25 | 14. 11 | 15. -7 |

**3.10 Solve Multi – Step Equations Involving Fractions**

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**Answers**

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|------------------|--------|-------|-------|---------------------|
| 1. 27            | 2. 12  | 3. 10 | 4. 8  | 5. $\frac{5}{7}$    |
| 6. $\frac{4}{7}$ | 7. 16  | 8. 96 | 9. 48 | 10. $27\frac{2}{7}$ |
| 11. 50           | 12. 12 | 13. 1 | 14. 1 | 15. $\frac{1}{4}$   |

**3.11 Solve Multi- Step Equations Involving Rational Numbers**

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**Answers**

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|-------------------|--------|------------------|--------|--------------------|
| 1. 3              | 2. -31 | 3. $\frac{3}{5}$ | 4. 9   | 5. $\frac{2}{3}$   |
| 6. $4\frac{1}{4}$ | 7. .5  | 8. -2            | 9. 12  | 10. $1\frac{1}{3}$ |
| 11. 36            | 12. 60 | 13. 30           | 14. 68 | 15. 3              |

**3.12 Write and Graph Inequalities**

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**Answers**

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|---------------------|--------------------|--------------------|
| 1. {1, 2, 3}        | 2. {6, 7, 8}       | 3. {-1, 0, 1}      |
| 4. {-2, -1, 0}      | 5. {13, 14, 15}    | 6. {4, 3, 2...}    |
| 7. {3, 4, 5...}     | 8. {-3, -2, -1...} | 9. {-5, -6, -7...} |
| 10. {11, 12, 13...} | 11. $x \leq -8$    | 12. $x > 50$       |
| 13. $x < -4$        | 14. $x > -12$      | 15. $x \geq -11$   |

**3.13 Solve Inequalities Using Addition or Subtraction**

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**Answers**

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|----------------|--------------|------------------|---------------|----------------|
| 1. $x > 6$     | 2. $y < 31$  | 3. $a < -1$      | 4. $b \geq 2$ | 5. $y \leq -2$ |
| 6. $x \geq -6$ | 7. $x < -14$ | 8. $x > 1$       | 9. $y > 15$   | 10. $a \geq 5$ |
| 11. $b > 6$    | 12. $x > 13$ | 13. $a \leq -12$ | 14. $x > 13$  | 15. $y > -46$  |

**3.14 Solve Inequalities Using Multiplication**

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**Answers**

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|--------------|------------------|------------------|------------------|-------------------|
| 1. $a < 30$  | 2. $x > 40$      | 3. $b < 100$     | 4. $x > 500$     | 5. $c \leq 40$    |
| 6. $x > 42$  | 7. $y \leq 18$   | 8. $y \geq 55$   | 9. $x < 6$       | 10. $y \geq -56$  |
| 11. $x < -6$ | 12. $y \leq -12$ | 13. $x \geq -22$ | 14. $a \geq -39$ | 15. $x \geq -110$ |

**3.15 Solve Inequalities Using Division**

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**Answers**

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|---------------|-----------------|----------------|-----------------|----------------|
| 1. $x < 4$    | 2. $x > 12$     | 3. $x < 12$    | 4. $x > 9$      | 5. $x > 11$    |
| 6. $x \leq 4$ | 7. $x \geq 3$   | 8. $x \leq 4$  | 9. $x > 3$      | 10. $x \leq 4$ |
| 11. $x > -9$  | 12. $n \leq -7$ | 13. $n \geq 9$ | 14. $x \geq -2$ | 15. $y > -2$   |

**3.16 Solving Inequalities Involving Combining Like Terms**

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**Answers**

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|----------------|-----------------|----------------|------------------|
| 1. $x > 9$     | 2. $x < 3$      | 3. $y > 10$    | 4. $x \leq -1/2$ |
| 5. $x \geq -2$ | 6. $x \leq 2$   | 7. $x > 12$    | 8. $x < -4$      |
| 9. $x > -60$   | 10. $x > -10$   | 11. $k > 3$    | 12. $x \leq 4$   |
| 13. $j < 6$    | 14. $b \geq -4$ | 15. $n \leq 5$ | 16. $z < -7$     |

**3.17 Solve Inequalities Using the Distributive Property**

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**Answers**

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|-----------------|-----------------|--------------|-------------|-----------------|
| 1. $x > 3$      | 2. $x < 3$      | 3. $y < 7$   | 4. $x < -4$ | 5. $x \geq 19$  |
| 6. $y \leq -12$ | 7. $x \leq 18$  | 8. $y > 1$   | 9. $x < -5$ | 10. $x \leq 6$  |
| 11. $y < -4$    | 12. $x \geq 32$ | 13. $x > -5$ | 14. $y < 1$ | 15. $x \leq -2$ |

**3.18 Write and Solve Multi-Step Inequalities Given Problem Situations**

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**Answers**

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|-------------------------------|---|---|
| 1. $16 \leq x \leq 25$        | 2. $16 \leq x, x \leq 25$                         | 3. Range from 16 to 25                            |
| 4. $-5 > 1/3n > 3$            | 5. $1/3n < -5$ or $1/3 > 3$                       | 6. $n < -15$ or $n > 9$                           |
| 7. $-5 < 2n \geq 9$           | 8. $n < -2 \frac{1}{2}$ or $n \geq 4 \frac{1}{2}$ | 9. $n < -2 \frac{1}{2}$ or $n \geq 4 \frac{1}{2}$ |
| 10. $8 < w + 3 < 12$          | 11. $5 < w$ and $w < 9$                           | 12. No  |
| 13. Range between \$6 and \$8 | 14. $30 \leq 3g \leq 105$                         | 15. 10 – 35 gallons of gasoline                   |