

EXTRA PRACTICE — Exercises

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Unit II – First Degree Relations with One Placeholder Part C – Special Cases of Equations and Inequalities Lesson 2 – Infinite Numbers of Solutions

Find the solution set for each of the following relations. If the solution set is infinite, indicate that in set notation

1. $13 - (3c + 2) \geq 2(c + 2) - 5c$

2. $-8(2x + 3) + 6(4 - 5x) \geq 2(1 - 7x) - 4(4 + 6x)$

3. $3 - 2[4x - (3 - x)] = x - 2 - 11(x - 1)$

4. $-2(x - 5) \leq 6(x + 7) - 8\left(x - \frac{1}{2}\right)$

5. $-42x + 45 = 3[7 - 2(7x - 4)]$

6. $\frac{1}{3}y + \frac{1}{4} = \frac{1}{2}y + 0.25 - \frac{1}{6}y$

7. $3(2 - 5x) + 2x > -2(4 - 2x) - 17x$

8. $5(4y - 2) - 7 = 15y - 17 + 5y$

9. $a + (a - 3) \leq 3a + 2 - (a + 1)$

10. $3(m + 2) - 5(m - 3) = -2m + 21$

EXTRA PRACTICE — Answer Key

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Find the solution set for each of the following relations. If the solution set is infinite, indicate that in set notation

1. $S = \{ c \mid c \leq \frac{57}{5} \}$

2. $S = \{ x \mid x \leq \frac{7}{4} \}$

3. $9 = 9$ True $S = \{ x \mid x \text{ is any real number} \}$

4. $10 \leq 46$ True $S = \{ x \mid x \text{ is any real number} \}$

5. $45 = 45$ True $S = \{ x \mid x \text{ is any real number} \}$

6. $\frac{1}{4} = \frac{1}{4}$ True $S = \{ x \mid x \text{ is any real number} \}$

7. $6 > -8$ True $S = \{ x \mid x \text{ is any real number} \}$

8. $-17 = -17$ True $S = \{ x \mid x \text{ is any real number} \}$

9. $-3 \leq 1$ True $S = \{ x \mid x \text{ is any real number} \}$

10. $21 = 21$ True $S = \{ x \mid x \text{ is any real number} \}$