EXTRA PRACTICE — Exercises

Unit II – First Degree Relations with One Placeholder
Part B – Complications on Equations and Inequalities
Lesson 3 – Placeholders on Both Sides

Find the solution set for each of the following relations by first getting rid of one of the groups of placeholders by adding the opposite.

1. $4y - 12 \leq 8y$

2. $7 - 2n < 3n - 3$

3. $9p - 3 < 11p + 4$

4. $2.1x + 3 = 51.3 - 1.35x$

5. $5x + 14 = 6x$

6. $7y + 11 = 8 - 5y$

7. $5m - 7m - 2 < 14 - 6m + 11$

8. $\frac{3}{4}a - \frac{1}{2} > a + \frac{2}{3}$

9. $\frac{3}{5}e + 11 = 31 - \frac{1}{5}e$

10. $\frac{2}{3}r + \frac{5}{2} = \frac{4}{5}r + \frac{7}{6}$

11. $18y + 36 > 8y - 4$

12. $\frac{3}{4}x + 11 \geq 31 - \frac{1}{5}x$

13. $2.9v - 5 = 3 - 0.3v$

14. $18x - 14 - 21x = 17 - x + 7$

15. $\frac{2}{7}y + 15 = \frac{6}{7}y + 9$

16. $9x + 10 - x \leq 2x + 40$

17. $7x - 15 - 3x < 14 - 6x + 11$

18. $\frac{5}{6}t - \frac{3}{8}t \geq \frac{1}{2}t - 2$

EXTRA PRACTICE — Answer Key

Unit II – First Degree Relations with One Placeholder
Part B – Complications on Equations and Inequalities
Lesson 3 – Placeholders on Both Sides

Find the solution set for each of the following relations by first getting rid of one of the groups of placeholders by adding the opposite.

1. $S = \{ y \mid y \geq -3 \}$

2. $S = \{ n \mid n > 2 \}$

3. $S = \{ p \mid p > \frac{-7}{2} \}$

4. $S = \{14\}$

5. $S = \{14\}$

6. $S = \{ \frac{-1}{4} \}$

7. $S = \{ m \mid m < \frac{27}{2} \}$

8. $S = \{ a \mid a < \frac{-14}{3} \}$

9. $S = \{25\}$

10. $S = \{10\}$

11. $S = \{ y \mid y > -4 \}$

12. $S = \{ x \mid x \geq \frac{400}{19} \}$

13. $S = \{ \frac{5}{2} \}$

14. $S = \{-19\}$

15. $S = \{ \frac{21}{2} \}$

16. $S = \{ x \mid x \leq 5 \}$

17. $S = \{ x \mid x < 4 \}$

18. $S = \{ t \mid t \leq 48 \}$