Exercise – 2.1

1. $3x = 2x + 18$

- $3x - 2x = 18$
- $x = 18$

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2. $5t - 3 = 3t - 5$

- $5t - 3t = -5 + 3$
- $2t = -2$
- $t = \frac{-2}{2} = -1$

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3. $5x + 9 = 5 + 3x$

- $5x - 3x = 5 - 9$
- $2x = -4$
- $x = \frac{-4}{2} = -2$

4. $4z + 3 = 6 + 2z$

- $4z - 2z = 6 - 3$
- $2z = 3$
- $z = \frac{3}{2}$

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5. $2x - 1 = 14 - x$

- $2x + x = 14 + 1$
- $3x = 15$
- $x = \frac{15}{3} = 5$

6. $8x + 4 = 3(x - 1) + 7$

- $8x + 4 = 3x - 3 + 7$
- $8x + 4 = 3x + 4$
- $8x - 3x = 4 - 4$
- $5x = 0$
- $x = 0$

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7. $x = \frac{4}{5}(x + 10)$

- $x = \frac{4x+40}{5}$
- Multiply both sides by 5: $5x = 4x + 40$
- $5x - 4x = 40$
- $x = 40$

8. $\frac{2x}{3} + 1 = \frac{7x}{15} + 3$

- Multiply both sides by 15: $10x + 15 = 7x + 45$
- $10x - 7x = 45 - 15$
- $3x = 30$
- $x = \frac{30}{3} = 10$

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9. $2y + \frac{5}{3} = \frac{26}{3} - y$

- Multiply all terms by 3: $6y + 5 = 26 - 3y$
- $6y + 3y = 26 - 5$
- $9y = 21$
- $y = \frac{21}{9} = \frac{7}{3} \approx 2.33$

10. $3m = 5m - \frac{8}{5}$

- $3m - 5m = -\frac{8}{5}$
- $-2m = -\frac{8}{5}$
- $m = \frac{8}{10} = \frac{4}{5} = 0.8$