Name _____ Date _____

Additional Exercises 2.1
Form I
The Addition Property of Equality

Identify the following equations in one variable as linear or not linear.

1. $x + 7 = 5$ 1. _____

2. $x^2 + 4 = 7$ 2. _____

3. $\frac{11}{x} = 5$ 3. _____

4. $|x + 4| = 8$ 4. _____

Solve the equation using the addition property of equality.

5. $a - 21 = -9$ 5. _____

6. $x + 17 = 28$ 6. _____

7. $4 = b - 9$ 7. _____

8. $t - 8 = 15$ 8. _____

9. $x + \frac{2}{6} = \frac{2}{6}$ 9. _____

10. $x + 0.7 = 1.5$ 10. _____

11. $8 = -14 + x$ 11. _____

12. $-31 = x - 14$ 12. _____

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13. $-14.5 = 12.2 + x$ 13. _____

14. $13 + 6p = 7p$ 14. _____

15. $8y = 7y - 8.8$ 15. _____

Solve.

16. The cost of having a car towed is given by the formula $C = 3x + 65$, where C is in dollars and x is the number of miles the car is towed. Find the cost of having a car towed 3 miles. 16. _____

17. The formula $C = 537x + 165$ models the cost to produce x units of product, where C is given in dollars. Find the total cost if 100 units are produced. 17. _____

18. The monthly cost of a certain long distance service is given by the formula $C = 0.07t + 4.95$ where C is in dollars and t is the amount of time in minutes called in a month. Find the cost of calling long distance for 100 minutes a month. 18. _____

19. The amount of water in a leaky bucket is given by the formula $f = 115 - 7t$, where f is in ounces and t is in minutes. Find the amount of water in the bucket after 5 minutes. 19. _____

20. The altitude above sea level of an airplane just after taking off from an airport on a high plateau is given by the formula $h = 700t + 2882$, where h is in feet and t is the time in minutes since takeoff. Find the altitude of the airplane after 3 minutes. 20. _____

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Additional Exercises 2.1
Form II
The Addition Property of Equality

Identify the following equations in one variable as linear or not linear.

1. $x+1=11$ 1. _____

2. $x^2-8=12$ 2. _____

3. $\frac{9}{x}=4$ 3. _____

4. $3x=15$ 4. _____

Solve the equation using the addition property of equality.

5. $21+x=7$ 5. _____

6. $-8+y=11$ 6. _____

7. $\frac{1}{3}+y=\frac{2}{3}$ 7. _____

8. $\frac{1}{5}+x=3$ 8. _____

9. $2.4+y=3.6$ 9. _____

10. $\frac{2}{5}+b=\frac{1}{4}$ 10. _____

11. $1.3+x=19.2$ 11. _____

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12. $x + \frac{1}{4} = -\frac{7}{2}$ 12. _____

13. $510 + y = 820$ 13. _____

14. $-7.1 + y = 7.1$ 14. _____

15. $y + \frac{5}{7} = \frac{5}{7}$ 15. _____

Solve.

16. The cost of having a car towed is given by the formula $C = 3x + 65$, where C is in dollars and x is the number of miles the car is towed. Find the cost of having a car towed 12 miles. 16. _____

17. The formula $C = 537x + 165$ models the cost to produce x units of product, where C is given in dollars. Find the total cost if 125 units are produced. 17. _____

18. The monthly cost of a certain long distance service is given by the formula $C = 0.07t + 4.95$ where C is in dollars and t is the amount of time in minutes called in a month. Find the cost of calling long distance for 120 minutes a month. 18. _____

19. The amount of water in a leaky bucket is given by the formula $f = 115 - 7t$, where f is in ounces and t is in minutes. Find the amount of water in the bucket after 10 minutes. 19. _____

20. The altitude above sea level of an airplane just after taking off from an airport on a high plateau is given by the formula $h = 700t + 2882$, where h is in feet and t is the time in minutes since takeoff. Find the altitude of the airplane after 5 minutes. 20. _____

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Additional Exercises 2.1
Form III
The Addition Property of Equality

Identify the following equations in one variable as linear or not linear.

1. $x + 51 = 80$ 1. _____

2. $x^2 + 13 = 20$ 2. _____

3. $\frac{5}{x} = 7$ 3. _____

4. $|9 + x| = 10$ 4. _____

Solve the equation using the addition property of equality.

5. $x - \frac{1}{2} = \frac{9}{10}$ 5. _____

6. $x + \frac{1}{6} = -\frac{5}{12}$ 6. _____

7. $510 + x = -805$ 7. _____

8. $x + 1.3 = 7$ 8. _____

9. $x + 9.5 = -4$ 9. _____

10. $-4y + 9 = -5y - 11$ 10. _____

11. $6x + 4 = 5(x + 2)$ 11. _____

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12. $9x + 11 + 2 = 8(x - 6)$ 12. _____

13. $14 - 3s = 12 - 4s$ 13. _____

14. $-4x + 5 + 3x = 12 - 4$ 14. _____

15. $-4.1 + 5x = 4x - 4.1$ 15. _____

Solve.

16. The cost of having a car towed is given by the formula $C = 3x + 65$, where C is in dollars and x is the number of miles the car is towed. Find the cost of having a car towed 52 miles. 16. _____

17. The formula $C = 537x + 165$ models the cost to produce x units of product, where C is given in dollars. Find the total cost if 210 units are produced. 17. _____

18. The monthly cost of a certain long distance service is given by the formula $C = 0.07t + 4.95$ where C is in dollars and t is the amount of time in minutes called in a month. Find the cost of calling long distance for 200 minutes a month. 18. _____

19. The amount of water in a leaky bucket is given by the formula $f = 115 - 7t$, where f is in ounces and t is in minutes. Find the amount of water in the bucket after 12 minutes. 19. _____

20. The altitude above sea level of an airplane just after taking off from an airport on a high plateau is given by the formula $h = 700t + 2882$, where h is in feet and t is the time in minutes since takeoff. Find the altitude of the airplane after 10 minutes. 20. _____