Worksheets for Solving Equations Name_____

Solving using Addition and Subtraction

1. $w + 9 = 13$

2. $t - 22 = -5$

3. $f + (-13) = -12$

4. $r - 7 = 9$

5. $g + 11 = -8$

6. $h - (-7) = 34$

7. $a + (-17) = 22$

8. $p - (-3) = -31$

9. $45 = 12 + k$

10. $17 = 25 + j$

11. $34 = 9 - m$

12. $-72 = -22 - v$

13. $42 = 11 - r$

14. $\frac{-3}{4} = f + 11$

15. $h - \frac{-6}{7} = \frac{4}{5}$

16. $12\frac{7}{12} - g = -3\frac{3}{5}$

17. $2.3 + t = 5.7$

18. $9.8 - y = -2.2$

19. $11.4 = 6.8 - t$

20. The sum of eleven and (j) is the same as negative five.

21. The difference of (n) and nine is thirty four.

22. Seven decreased by negative m is the same as sixty two.

23. The difference of twelve and (d) is negative nine.

Solving using Multiplication and Division

1. $3x = -36$

2. $-5p = -35$

3. $11t = 77$

4. $9m = -63$

5. $7b = -11$

6. $8j = 27$

7. $w \div \frac{1}{4} = -8$

8. $r \div 3\frac{2}{5} = 17$

9. $v \div (\frac{-7}{11}) = 1\frac{2}{7}$

10. $n \div \frac{2}{3} = \frac{-4}{9}$

11. $\frac{-3}{5}z = -40$

12. $\frac{t}{7} = -13$

13. $\frac{r}{-5} = -7.2$

14. $\frac{3}{5}y = 15$

15. $\frac{6}{j} = 11$

16. $\frac{9}{h} = -3$

17. $3\frac{4}{7}f = -3\frac{3}{4}$

18. Eight times a number is 216.

19. One third of a number is eight and one fifth.

20. The quotient of (d) and five is negative sixteen.

Solving Equations Using More Than One Step.

1. $5g + 9 = 29$

2. $35 = 2t + (-7)$

3. $4 + 2g = -12$

4. $11m - 7 = 81$

5. $8 - 3f = 23$

6. $3 + .2b = 8.6$

7. $\frac{y}{5} + 7 = -4$

8. $\frac{g}{-3} - 8 = 5$

9. $7 = \frac{w}{2} + 5$

10. $-5 = \frac{c}{2} + 13$

11. $\frac{4}{5}y + 5 = \frac{3}{5}$

12. $\frac{t + 14}{5} = 11$

13. $-7 = \frac{4 + k}{4}$

14. $-11 = \frac{5t - 3}{6}$

15. $\frac{4 - 2h}{5} = -3$

16. $\frac{5 - 3d}{2} = 7$

17. $8 + (-5k) = -37$

18. $4j + (-3) = -1$

19. Find two consecutive odd integers whose sum is 116.

20. Find two consecutive even integers whose sum is 126.

21. Find three consecutive odd integers whose sum is (–9).

22. Find three consecutive even integers whose sum is 84.

23. Find four consecutive odd integers whose sum is 8.

24. Find four consecutive even integers such that twice the least number increased by the greatest number is equal to 96.

25. Karen now has six more than twice the number of newspaper customers than she started off with. If she now has 98 customers, how many newspaper customers did she start off with.

Solving Equations Involving the Distributive Property

1. $4(2w + 5) = 8$

2. $-3(g + 2) = -15$

3. $5(t - 3) + 4t = 11$

4. $-5(3r - 6) = 60$

5. $\frac{3}{4}(4t + 20) = 22$

6. $\frac{3}{7}(21m + 14) - 7m = 32$

7. $\frac{3}{5}(5a - \frac{15}{9}) + 8 = -5$

8. $-5(y - 2) + 3y = -12$

9. $5(b + 4) - 6b = -24$

10. $9(3 - t) + 3t = 30$

11. $-4w + 3(2w - 5) = 31$

12. $4(2f + 3) - 4f = 13$

13. The attendance at a football game was 400 people. Student tickets cost $2 and adult tickets cost $3. If $1050 was collected how many of each type of ticket was sold.

14. The lengths of the sides of a triangle are consecutive integers. If the perimeter is 42 what is the length of each side.

15. The attendance at a basketball game was 500 people. Student tickets cost $2.50 and adult tickets cost $3.50. If $1550 was collected how many of each type of ticket was sold.

16. Five times the greatest of three consecutive integers increased by twice the least of those numbers is equal to 213. Find the three consecutive integers.

17. The sum of three consecutive even integers is 93. Find the three even integers.

Solving Equations With Variables on Both Sides of the Equation

1. $5x + 9 = 3x + (-5)$

2. $3w + 2 = 5w + 22$

3. $-3(d - 8) - 5 = 9(d + 2) + 1$

4. $2(w - 8) + 7 = 5(w + 2) - 3w - 19$

5. $-3k + 5(6 - k) = 4(1 - 2k)$

6. $\frac{3}{4}h + 16 = 2 - \frac{1}{8}h$

7. $5n + 4 = 7(n + 1) - 2n$

8. $-3(2t - 5) = \frac{1}{2}(-12t + 30)$

9. $\frac{3}{5}(5t - 40) + 8t = \frac{-2}{3}(6t - 9) + 5$

10. $6(3d - 5) + 13 = 22d + 8$

11. $\frac{2}{7}(35 - 14r) + 5r = 17r - (-13)$

12. $4(2a - 8) = \frac{1}{7}(49a + 70)$

13. $2[d + 3(d - 1)] = 18$

14. $4(r - 2) = 5r + 5 - r$

15. $\frac{2}{7}a + \frac{1}{7} = \frac{-5}{7}$

16. $\frac{3}{4}g - \frac{5}{4} = \frac{1}{3}g$

17. $\frac{1}{2}h + \frac{3}{8} = -2h$

18. $\frac{1}{3}n + \frac{3}{4} = \frac{5}{6}n - 4$

19. $\frac{1}{5}d + \frac{2}{3} = 4\frac{2}{3}d - 1\frac{1}{5}$

20. $\frac{3m - (-7)}{3} = \frac{2m + (-3)}{4} - \frac{4m + 3}{2}$

21. $\frac{5a - 3}{4} = \frac{2a + 5}{3} + \frac{a + 3}{2}$

22. $\frac{11h - 1}{2} = \frac{5h + 2}{3} + \frac{3h - 4}{6}$

Dealing with Some Basic Word Problems.

1. Twice a number increased by twelve is thirty one less than three times the number. Find the number.

2. Twice the greater of two consecutive odd integers is 13 less than three times the lesser. Find the integers.

3. Three times the greatest of three consecutive even integers exceeds twice the least by 38. Find the integers.

4. Last year, Maria sold 7 sedans more than twice the number that Tony sold. Maria sold 83 sedans. How many did Tony sell.

5. Suppose that you are selling stuffed animals. Rabbits cost $5 and monkeys cost $6. If there were five more rabbits sold than monkeys and a total of $190 was paid. How many of each animal was sold.

6. The total charge for one car and five bicycles to cross a bridge is $7.50. The toll for a car is $1.50 more than for a bicycle. Find the cost for a car to cross the bridge.

7. One fifth of a number plus five times that number is equal to seven times the number less eighteen. Find the number.

8. The difference of two numbers is twelve. Two fifths of the greater number is six more than one third of the lesser number. Find both numbers.

9. The sum of two numbers is 25. Twelve less than four times one of the numbers is sixteen more than twice the other number. Find both numbers.

10. Twice the sum; of five times a number and eleven, increased by three times that number, is equal to seven times; the difference of three times that number and four, decreased by nine. Find the number.