HOMEWORK

Homework Problems

Circle the homework problems assigned to you by the computer, then complete them below.

Explain
Solving Equations I

1. Solve for x: $x + 15 = 37$

2. Is $y = 77$ a solution of the equation $y - 23 = 54$?

3. Solve for t: $9t = 108$

4. Solve for w: $-7 = w + 29$

5. Solve for v: $\frac{1}{3}v = 2$

6. Solve for x: $2x + 3 = 17$

7. Solve for y: $-1 = \frac{1}{4}y + 2$

8. Is $s = 4$ a solution of the equation $5s - 4 = 11$?

9. Francisco bought eight bottles of juice for $12.00. How much did a single bottle of juice cost?

10. Vanessa took the $50 she got for birthday money and went to buy fish. If she got six angel fish and had $14 left over, how much did one angel fish cost?

11. Solve for z: $4z + 13 = 1$

12. Solve for x: $-3 = \frac{1}{7}x - 6$

Solving Equations II

13. Solve for y: $\frac{2}{3}y = 2$

14. Solve for x: $\frac{1}{3}(x + 8) = 7$

15. Solve for x: $x + 1 = x - 3$

16. Solve for x: $\frac{2}{5}(x - 3) = \frac{3}{5}x$

17. Solve for z: $-\frac{2}{3}(2z + 3) = \frac{1}{2}(1 - z)$

18. Solve for w: $4(w + 1) - 3w = w + 4$

19. The formula to find the circumference of a circle is $C = 2\pi r$, where C is the circumference of a circle and r is the radius. Solve the formula $C = 2\pi r$ for r.

20. Solve for y: $\frac{1}{2}y + 2 = \frac{1}{6}(3y - 9)$

21. Solve for x: $-3(2x + 1) = 7(2 - x)$

22. The math score on a college entrance exam can be written as $S = 200 + 20R - 5W$, where S is the score, R is the number of right answers, and W is the number of wrong answers. Dana's score on the test was 525 and he answered 19 questions correctly. How many questions did he answer incorrectly?

23. Solve for z: $\frac{1}{3}(4z - 3) = 4x - 5$

24. A formula which relates the measure of the interior angles of a regular polygon to the number of sides of the polygon is $360 + an = 180n$, where n is the number of sides and a is the measure of the interior angle. Solve this equation for a.

Explore

25. Apply the distributive property to remove the parentheses on both sides of the equation $9(x + 5) = 6(2x + 7)$, then solve for x.

26. Solve for x: $\frac{3x}{7} + 2 = 8$

27. Find the least common multiple of the denominators of the fractions in the equation $\frac{5}{6}y = \frac{3}{14}(4y + 3)$, then use it to solve the equation.

28. Apply the distributive property to remove the parentheses on both sides of the equation $-2(5 - 3x) = 4(x - 7)$, then solve for x.

29. Solve for z: $-7 = \frac{2}{3}z - 5$

30. Find the least common multiple of the denominators of the fractions in the equation $\frac{5}{12}(7 + x) = \frac{7}{18}(x + 8)$, then use it to solve the equation.

APPLY

Practice Problems

Here are some additional practice problems for you to try.

Solving Equations I

1. Is $x = 3$ a solution of $x - 7 = 4$?
2. Is $y = -5$ a solution of $y + 3 = -2$?
3. Solve for a: $a + 5 = 23$
4. Solve for x: $x + 6 = 19$
5. Solve for b: $b - 10 = 14$
6. Solve for m: $m - 9 = 24$
7. Solve for z: $z - 7 = 12$
8. Solve for x: $15 - x = 8$
9. Solve for x: $24 - x = 16$
10. Solve for t: $21 - t = 11$
11. Solve for r: $3r + 2 = 17$
12. Solve for s: $7s + 12 = 26$
13. Solve for a: $5a + 3 = 23$
14. Solve for m: $5m - 9 = 41$
15. Solve for p: $6p - 11 = 13$
16. Solve for k: $8k - 5 = 19$
17. Solve for b: $4b - 5 = -21$
18. Solve for b: $9b + 3 = -42$
19. Solve for n: $3n - 12 = -33$
20. Solve for h: $12 + 5h = -38$
21. Solve for q: $14 + 7q = -42$
22. Solve for v: $16 + 4v = -20$
23. Solve for c: $22 - 4c = 42$
24. Solve for d: $56 - 5d = 31$
25. Solve for x: $16 - 3x = 22$
26. Solve for k: $-10 - 6k = 26$
27. Solve for f: $-25 - 9f = 11$

Solving Equations II

28. Solve for y: $-7 - 3y = 8$
29. Solve for h: $10h - 9 = 6h + 3$
30. Solve for y: $12y - 13 = 7y + 12$
31. Solve for t: $3(t - 6) = -8(1 - t)$
32. Solve for u: $-6(2u - 3) = 5(u - 10)$
33. Solve for c: $-7(2c + 5) = 3(c - 6)$
34. Solve for x: $4(x + 3) = -5(3x - 10)$
35. Solve for p: $\frac{1}{4}(p - 5) = 3$
36. Solve for r: $\frac{1}{8}(r + 3) = 6$
37. Solve for y: $-\frac{2}{3}(4 - y) = 6$
38. Solve for z: $\frac{3}{4}(z + 3) = 9$
39. Solve for c: $\frac{1}{2}(c + 8) = \frac{1}{4}c$
40. Solve for b: $-\frac{1}{3}(4 - b) = \frac{1}{7}b$
41. Solve for a: $\frac{1}{5}a + 8 = -\frac{3}{5}(a - 15)$
42. Solve for m: $12 - \frac{3}{10}m = \frac{7}{10}(m + 20)$
43. Solve for n: $\frac{1}{8}n + 6 = -\frac{5}{8}(n - 16)$
44. Solve for b: $-\frac{1}{3}(15 - 6b) = 2b - 5$
45. Solve for r: $5r + 2 = \frac{1}{7}(35r + 14)$
46. Solve for p: $\frac{1}{2}(6p + 12) = 3p + 6$

47. Solve for t: $-8\left(\frac{1}{4}t - 4\right) = 12 - 2t$

48. Solve for y: $3(5 + \frac{1}{6}y) = 8 + \frac{1}{2}y$

49. Solve for x: $6(3 + \frac{1}{2}x) = 3x + 7$

50. Solve for d: $\frac{4}{3}d + 16 = \frac{4}{3}(d + 12)$

51. Solve for z: $\frac{5}{4}z - 10 = -\frac{5}{4}(8 - z)$

52. Solve for w: $\frac{3}{2}w + 12 = \frac{3}{2}(w + 8)$

53. Solve for z: $4z - 3y = 8$

54. Solve for c: $5b - 2c = 10$

55. Solve for x: $3y - \frac{1}{3}x = 4$

56. Solve for t: $\frac{1}{2}t + 3v = 5$

57. The formula for the area of a triangle is $A = \frac{1}{2} \cdot b \cdot h$, where A is the area of the triangle, b is the length of its base, and h is its height. Solve this formula for b.

58. The formula for the area of a trapezoid is $A = \frac{1}{2}h(a + b)$, where A is the area of the trapezoid, a and b are the lengths of its two bases, and h is its height. Solve this formula for a.

59. The formula for the volume of a pyramid with a rectangular base is $V = \frac{1}{3}lwh$, where V is the volume of the pyramid, l is the length of its base, w is the width of its base and h is the height of the pyramid. Solve this formula for w.

60. The formula for the volume of a cylinder is $V = \pi r^2 h$, where V is the volume, r is the radius of the base, and h is the height of the cylinder. Solve this formula for h.

EVALUATE

Practice Test

Take this practice test to be sure that you are prepared for the final quiz in Evaluate.

1. Solve for x: $x + 16 = 5$

2. To isolate z in the equation $-\frac{1}{2}z = 6$, by what number do you multiply both sides of the equation?

3. Solve for y: $-2y = 18$

4. Solve for x: $3x - 4 = 11$

5. Solve for x: $3(2x + 4) = 2(3x + 6)$

6. Solve for y: $2(y - 10) = 10 + 2y$

7. To solve the equation $8x - 2 = 6 - 2x$, you might begin by adding $2x$ to both sides of the equation. What would be the resulting equation?

8. Solve for z: $\frac{1}{4}(z + 3) = 1$

9. What is the resulting equation when you use the distributive property to remove parentheses from the equation $5(3x - 2) = 2(x + 3)$?

10. Solve for x: $-\frac{2}{3}(1 - 4x) = \frac{2}{9}(5x + 4)$

11. Solve for y: $8x - y = 5$

12. Solve for x: $8x - y = 5$