

Name : key

Score : _____

Teacher : _____

Date : _____

Solve the Equations

Round your answers to the nearest hundredth if needed.

1) $9.5 - 8.5(1 + 4a) = -26.5$

$$9.5 - 8.5 - 34a = -26.5$$

$$\begin{array}{r} 1 - 34a = -26.5 \\ -1 \quad -1 \\ -34a = -27.5 \\ \div 34 \quad \div 34 \end{array} \quad a = 0.81$$

6) $6.5s + 9 - 7.5 = -30.5$

$$6.5s + 1.5 = -30.5$$

$$\begin{array}{r} 6.5s = -32 \\ \div 6.5 \quad \div 6.5 \end{array} \rightarrow s = 4.92$$

2) $-28.5 = -3(2.5y - 2)$

$$-28.5 = -7y + 6$$

$$\begin{array}{r} -34.5 = -7y \\ \div -7 \quad \div -7 \end{array}$$

$$y = 4.93$$

7) $-15.5 = 6v - 5.5v$

$$-15.5 = 0.5v$$

$$-31 = v$$

3) $7x - 3 + 7.5x = 23.5$

$$14.5x - 3 = 23.5$$

$$\begin{array}{r} 14.5x = 26.5 \\ \div 14.5 \quad \div 14.5 \end{array} \rightarrow x =$$

8) $9.5(4.5z + 2.5) = -18.5 + 3z$

$$42.75z + 23.75 = -18.5 + 3z$$

$$\begin{array}{r} 42.75z = -42.25 + 3z \\ -3z \quad -3z \end{array}$$

$$\begin{array}{r} 39.75z = -42.25 \\ \div 39.75 \quad \div 39.75 \end{array} \rightarrow z = -1.06$$

4) $-21.5 = 4.5 + 2(b - 8.5)$

$$-21.5 = 4.5 + 2b - 17$$

$$\begin{array}{r} -21.5 = 2b - 12.5 \\ +12.5 \quad +12.5 \end{array}$$

$$\begin{array}{r} -9 = 2b \\ \div 2 \quad \div 2 \end{array} \rightarrow b = \frac{9}{2}$$

9) $-7.5(6 - 9.5c) = -20.5$

$$-45 + 71.25c = -20.5$$

$$\begin{array}{r} 71.25c = 24.5 \\ \div 71.25 \quad \div 71.25 \end{array}$$

$$c = 0.34$$

5) $-8(7.5d + 4) = 15.5$

$$-60d - 32 = 15.5$$

$$\begin{array}{r} -60d = 47.5 \\ \div -6 \quad \div -6 \end{array}$$

$$d = -7.92$$

10) $8f + 4f = 27.5$

$$\begin{array}{r} 12f = 27.5 \\ \div 12 \quad \div 12 \end{array}$$

$$f = 2.29$$

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1) $-6.5s - 5.5 - 2.5 = 20.5$

$$\begin{array}{r} -6.5s - 8 = 20.5 \\ +8 \quad +8 \end{array}$$

$$\begin{array}{r} -6.5s = 28.5 \\ \div -6.5 \quad \div -6.5 \end{array} \rightarrow s = -4.38$$

2) $15.5 = 6 + 3(z - 3.5)$

$$15.5 = 6 + 3z - 10.5$$

$$\begin{array}{r} 15.5 = 3z - 4.5 \\ +4.5 \quad +4.5 \end{array}$$

$$\begin{array}{r} 20 = 3z \\ \div 3 \quad \div 3 \end{array} \rightarrow z = 6.67$$

3) $16.5 + 4.5c = -7(8c - 3)$

$$\begin{array}{r} 16.5 + 4.5c = -56c + 21 \\ +56c \quad +56c \end{array}$$

$$\begin{array}{r} 16.5 + 60.5c = 21 \\ -16.5 \quad -16.5 \end{array}$$

$$\begin{array}{r} 60.5c = 4.5 \\ \div 60.5 \quad \div 60.5 \end{array} \rightarrow c = 0.07$$

4) $7(5r - 3.5) = -16.5 + 8.5r$

$$\begin{array}{r} 35r - 24.5 = -16.5 + 8.5r \\ -8.5r \quad -8.5r \end{array}$$

$$\begin{array}{r} 26.5r - 24.5 = -16.5 \\ +24.5 \quad +24.5 \end{array}$$

$$\begin{array}{r} 26.5r = 8 \\ \div 26.5 \quad \div 26.5 \end{array} \rightarrow r = 0.30$$

5) $-5f + 3.5 + 3f = 29.5$

$$\begin{array}{r} -2f + 3.5 = 29.5 \\ -3.5 \quad -3.5 \end{array}$$

$$\begin{array}{r} -2f = 26 \\ \div -2 \quad \div -2 \end{array} \rightarrow f = -13$$

6) $5(3 + 4.5k) = -25.5$

$$\begin{array}{r} 15 + 22.5k = -25.5 \\ -15 \quad -15 \end{array}$$

$$\begin{array}{r} 22.5k = -40.5 \\ \div 22.5 \quad \div 22.5 \end{array}$$

$$k = -1.8$$

7) $18.5 = -3.5(3h + 7)$

$$\begin{array}{r} 18.5 = -10.5h - 24.5 \\ +24.5 \quad +24.5 \end{array}$$

$$43 = -10.5h$$

$$\div -10.5 \quad \div -10.5$$

$$h = -4.10$$

8) $-26.5 = 6.5b + 6b$

$$-26.5 = 12.5b$$

$$\div 12.5 \quad \div 12.5$$

$$b = -2.12$$

9) $7.5 - 4(1 - 5.5x) = -30.5$

$$7.5 - 4 + 22x = -30.5$$

$$\begin{array}{r} 3.5 + 22x = -30.5 \\ -3.5 \quad -3.5 \end{array}$$

$$22x = -34$$

$$\div 22 \quad \div 22$$

$$\rightarrow x = -1.55$$

10) $7(3d - 2.5) = -19.5$

$$\begin{array}{r} 21d - 17.5 = -19.5 \\ +17.5 \quad +17.5 \end{array}$$

$$21d = -2$$

$$\div 21 \quad \div 21$$

$$\rightarrow d = -0.10$$