

Name: KEY

Read all directions and problems carefully! Show all appropriate work for credit.

1. Solve the following equations.

2. $-(7x+5) = 13-3x$

$2-7x-5 = 13-3x$

$-7x-3 = 13-3x$
 $+3x \quad +3 \quad +3 \quad -3x$

$-4x = 16$
 $\frac{-4x}{-4} = \frac{16}{-4}$

$X = -4$

(+2)

$5(2x+3) - 8x = 2(x-1) + 17$

$10x+15-8x = 2x-2+17$

$2x+15 = 2x+15$

$-2x-15 \quad -2x-15$

(+3)

$0 = 0$

\square

OR TRUE FOR ALL REAL

$100(0.5+0.4x-0.7) = 0.4x-1.25-0.1x$

#5

$50+40x-70 = 40x-125-10x$

$40x-20 = 30x-125$

$-30x \quad -30x$

$10x-20 = -125$

$+20 \quad +20$

$10x = -105$

$X = -10.5$

(+2)

$\frac{3}{1} \left(\frac{x+1}{4} + \frac{2-x}{3} + \frac{1}{6} \right) \frac{12}{1}$

LCO: 12

$3(x+1) = 4(2-x) + 2$

$X = 7$

$3x+3 = 8-4x+2$

$X = 1$

$3x+3 = -4x+10$

$+4x-3 \quad +4x-3$

$7x = 7$

(+3)

SET UP the following word problems, but DO NOT SOLVE!

2. Two times the larger of two consecutive even integers is 12 less than 3 times the smaller. Find the integers.

LET $X =$ FIRST EVEN INTEGER (SM)

LET $X+2 =$ THE NEXT CONSECUTIVE EVEN INT. (LGR)

$2(X+2) = 3X - 12$

(+2)

3. How many ounces of a 10% baking soda solution must be added to 40 ounces of a 2% baking soda solution to make a 5% baking soda solution?

LET $X =$ AMT OF 10% B.S.

%-AGE | AMT. | PURE BAKING SODA

10% SOL. .10 $\cdot X = .10X$

2% SOL. .02 $\cdot 40 \text{ oz} = .02(40)$

5% SOL. .05 $\cdot (X+40) = .05(X+40)$

(+3)

$.10X + .02(40) = .05(X+40)$

OR

$.10X + 0.8 = .05X + 2$

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