Two Right, One Wrong   Name _____

Two of the equations are solved correctly. One is solved incorrectly.
Directions: 1. Identify the one that is wrong. 2. Highlight the mistake.
                3. Solve the incorrect problem properly.
                4. Explain your thinking.

$5v - 4(1 + v) = -19 + 4v$

$5v - 4 - 4v = -19 + 4v$

$9v - 4 = -19 + 4v$

$-4v \qquad\qquad - 4v$

$5v - 4 = -19$

$\underline{\ +4 \qquad + 4\ }$

$5v = -15$

$\overline{5} \qquad \overline{5}$

$\boldsymbol{v = -3}$

$8(6n - 7) + 6n = 6 + 11n$

$48n - 56 + 6n = 6 + 11n$

$\underline{-6n \qquad\quad - 6n}$

$42n - 56 \qquad\quad = 6 + 11n$

$\underline{\quad +56 \qquad\quad + 56}$

$42n = 62 + 11n$

$\underline{\quad -11n \qquad\quad - 11n}$

$\underline{31n = 62}$

$31 \qquad 31$

$\boldsymbol{n = 2}$

$-12 - 6n = 4(6 - 6n)$

$-12 - 6n = 24 - 24n$

$\underline{\quad +24n \qquad\quad + 24n}$

$-12 + 18n = 24$

$\underline{+12 \qquad\qquad + 12}$

$\underline{\qquad 18n = 36}$

$18 \qquad 18$

$\boldsymbol{n = 2}$

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$$-4r - 8(5 - 6r) = 4r$$
$$-4r - 40 - 48r = -12r$$
$$-52r - 40 = -12r$$
$$+52r \qquad + 52r$$
$$\frac{-40}{40} = \frac{40r}{40}$$
$$-1 = r$$

$$-2 + 4x = -(x - 3)$$
$$-2 + 4x = -x + 3$$
$$\underline{+2 \qquad\qquad + 2}$$
$$4x = -x + 5$$
$$\underline{+x \qquad + x}$$
$$\frac{5x = 5}{5 \qquad 5}$$
$$x = 1$$

$$6(6b - 7) - 2 = 34 - 3b$$
$$36b - 42 - 2 = 34 - 3b$$
$$36b - 44 \quad = 34 - 3b$$
$$\underline{+3b \qquad\qquad + 3b}$$
$$39b - 44 \quad = 34$$
$$\underline{+44 \quad = +44}$$
$$\frac{39b}{39} = \frac{78}{39}$$
$$b = 2$$

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$3(3v - 2) = 4v - 31$
$9v - 6 = 4v - 31$
$\underline{-4v \qquad - 4v}$
$5v - 6 = -31$
$\underline{\quad +6 \quad + 6}$
$5v = -25$
$5 \qquad 5$
$v = -5$

$37 - 5b = 4(1 + 7b)$
$37 - 5b = 4 + 28b$
$\underline{-37 \quad - 37}$
$-5b = -33 + 28b$
$\underline{-28b \qquad - 28b}$
$\underline{-33b = -33}$
$-33 \qquad -33$
$b = 1$

$36 + 5b = 4(1 + 7b)$
$36 + 5b = 4 + 7b$
$\underline{\quad -5b \qquad - 5b}$
$36 \qquad = 4 + 2b$
$\underline{-4 \qquad - 4}$
$\dfrac{32}{2} \quad = \quad \dfrac{2b}{2}$
$16 = b$

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$-(3x + 2) = -3x - 2$
  $-3x - 2 = -3x - 2$
  $\underline{+3x \qquad + 3x}$
        $-2 = \quad -2$
infinitely many solutions

$3 - 2k = -5(2k - 7)$
$5 - 2k = -10k - 35$
$\underline{-5 \qquad\qquad\quad -5}$
    $-2k = -10k - 40$
  $\underline{+10k \quad + 10k}$
      $8k \quad = \quad -40$
      $8 \qquad\qquad 8$
         $\boldsymbol{k = -5}$

$17 + 8v = 6(v + 5) - 1$
$17 + 8v = 6v + 30 - 1$
$17 + 8v = 6v + 29$
$\underline{-17 \qquad\qquad -17}$
      $8v = 6v + 12$
   $\underline{-6v - 6v}$
      $2v = \quad 12$
      $2 \qquad 2$
      $\boldsymbol{v = 6}$

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$$-26 - 6x = 2(7x + 7)$$
$$-26 - 6x = 14x + 14$$
$$\underline{+26 \qquad\qquad + 26}$$
$$-6x = 14x + 40$$
$$\underline{-14x - 14x}$$
$$-20x = \quad 40$$
$$-20 \qquad - 20$$
$$\boldsymbol{x = -2}$$

$$13 - 7a = -8(a - 1) + 5$$
$$13 - 7a = -8a + 8 + 5$$
$$\underline{\qquad\qquad\qquad -5 \ - 5}$$
$$13 - 7a = -8a + 3$$
$$\underline{-13 \qquad\qquad - 13}$$
$$-7a = -8a - 10$$
$$\underline{+8a \quad + 8a}$$
$$\boldsymbol{a = -10}$$

$$7(1 - 7x) = -39 - 3x$$
$$7 - 49x = -39 - 3x$$
$$\underline{+49x \qquad + 49x}$$
$$7 \quad = -39 + 46x$$
$$\underline{+39 \qquad + 39}$$
$$46 = \quad 46x$$
$$46 \qquad 46$$
$$\boldsymbol{x = 1}$$

Two Right, One Wrong   Name _____

Two of the equations are solved correctly. One is solved incorrectly.
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             3. Solve the incorrect problem properly.
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$37 + 3a = -8(3a - 8)$ $-5(1 + 7n) = -5 + 3n$

$37 + 3a = -24a + 64$ $-5 - 35n = -5 + 3n$

$\underline{\quad -3a \qquad - 3a \quad}$ $\underline{+5 \qquad\qquad + 5 \quad}$

$37 \qquad = -27a + 64$ $\qquad -35n = \qquad 3n$

$\underline{-64 \qquad\qquad\quad - 64\quad}$ $\underline{\qquad -3n \qquad - 3n\quad}$

$-27 \qquad = -27a$ $\qquad -38n = 0$

$-27 \qquad\quad - 27$ $\qquad -38 \quad - 38$

$\mathbf{1 = a}$ $\mathbf{n = 0}$

$-4(1 - 2r) = -r - 13$

$\quad -4 + 8r = -r - 13$

$\underline{\quad +4 \qquad\qquad\quad + 4\quad}$

$\qquad\qquad 8r = -r - 9$

$\underline{\qquad +r = +r \quad}$

$\qquad 9r = \qquad -9$

$\qquad 9 \qquad\qquad 9$

$\qquad \mathbf{r = 0}$