Solve the following system of equations using the elimination method. *Remember to check your solution.*

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1. $-1\ (c - 2d = 14)$ $-c + 2d = -14$
      $c + 3d = 9$ $\underline{c + 3d = 9}$
                          $5d = -5$
                          $d = -1$

                          $c + 3d = 9$
                          $c + 3(-1) = 9$
                          $c - 3 = 9$
                          $c = 12$

common solution (12, -1)

2. $-1\ (a - 4b = -8)$ $-a + 4b = 8$
      $a - 2b = 0$ $\underline{a - 2b = 0}$
                          $2b = 8$
                          $b = 4$

                          $a - 2b = 0$
                          $a - 2(4) = 0$
                          $a - 8 = 0$
                          $a = 8$

common solution (8, 4)

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3. $8a + 5b = 9$
    $\underline{2a - 5b = -4}$
    $10a = 5$
     $a = .5$
    $2a - 5b = -4$
    $2(.5) - 5b = -4$
     $1 - 5b = -4$
      $-5b = -5$
       $b = 1$

common solution (.5, 1)

4. $-1(-2m + 4n = 13)$ $2m - 4n = -13$
      $6m + 4n = 9$ $\underline{6m + 4n = 9}$
                        $8m$ $= -4$
                        $m = -.5$

                        $-2m + 4n = 13$
                        $-2(-.5) + 4n = 13$
                        $1 + 4n = 13$
                        $4n = 12$
                        $n = 3$

common solution (- .5, 3)

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5. $3(4x - y = 10)$ $12x - 3y = 30$
      $2x + 3y = 12$ $\underline{2x + 3y = 12}$
                      $14x$ $= 42$
                       $x = 3$

                      $2x + 3y = 12$
                      $2(3) + 3y = 12$
                      $6 + 3y = 12$
                        $3y = 6$
                        $y = 2$

common solution (3, 2)

6. $5x + 8y = 1$ $5x + 8y = 1$
      $-2(3x + 4y = -1)$ $\underline{-6x - 8y = 2}$
                      $-x$ $= 3$
                      $x = -3$

                      $5x + 8y = 1$
                      $5(-3) + 8y = 1$
                      $-15 + 8y = 1$
                        $8y = 16$
                        $y = 2$

common solution (-3, 2)