Simplifying Expressions

Simplify each expression using the three property

1) 3(4x 3y +10) + 4(3y +6)

   = 12x - 9y + 30 + 12y +24
   = 12x - 9y + 12y + 30 + 24
   = 12x + 3y + 54

2) 2 (23 l * 5) + 6 l

   = 2(115 l) + 6 l
   = 230 l + 6 l
   =236 l

3) (4p + 10q) - (2p - 6q)

   = 4p +10q -2p +6q
   = 4p -2p +10q +6q
   = 2p +16q

4) 5 (6d - 6 - 10d)

   = 5 (6d -10d -6)
   = 5 (-4d - 6)
   = -20d - 30

5) (p + q) - (p -r) + (q - r)

   = p + q - p + r + q - r
   = p - p + q + q + r - r
   =2q

6) 4 (6d - 3e + 4f)

   = 4 x 6d + 4 x -3e + 4 x 4f
   = 24d -12e +16f

7) 2x + (7y +10 xy +3y) + 2xy

   = 2x +7y + 10 xy + 3y + 2xy
   = 2x + 7y + 3y +10xy + 2xy
   = 2x + 10y + 12xy

8) -2(6a - 3b) + 3(2b - 4a)

   = -2 * 6a -2* -3b + 3 * 2b + 3 * -4a
   = -12a + 6b + 6b -12a
   = -12a -12a + 6b + 6b
   = -24a + 12b

9) (4u -9v) - (2u + 5v)

   = 4u -9v -2u - 5v
   = 2u -14v

10) 6m -9s + 25m - 6m -10s

   = 6m -6m -9s -10s + 25s
   = -19s + 25m

11) -2(2s - 6t) + 3(4t - 3s)

   = -2 x 2s -2 x -6t +3 x 4t +3 x -3s
   = -4s + 12t + 12t +-9s
   = -4s -9s + 12t + 12t
   = -13s + 24t

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