PS1

lott (random)   23
guess   44   no   match

split   lott = 23
             lottDg1 = lott//10   = 2 $10\overline{)23}$ ②
             lottDg2 = lott%10   = 3 $10\overline{)23}$ 2
                                                          20
                                                          ③

             guess = 44
                guessDg1 = guess//10   = 4
                guessDg2 = guess%10   = 4

---

① Exact match   lottDg1   lottDg2
                         2   3
                         ↑   ↑
                         4   4
                      guessDg1   guessDg2

         if   lott == guess

② match one digit
                                  lottDg1   lottDg2
                                    2   3
   if lottDg1 == guessDg1   ↑ ⇐   ⇒   3 ↲
    or lottDg1 == guessDg2   3   4
    or lottDg2 == guessDg1   guessDg1   guessDg2
    or lottDg2 == guessDg2

③   2   3

                                     3   2

PS2 Tax

income 40000

2017

9325 @ 10%	9325 x .1	932.50
9326 to 37950 @ 15% 37950 − 9325 = 28625	28625 x .15	4,293.75
37 951 to 91,900 @ 25 40 000 − 37950 = 20 50	2050 x .25	512.50
	Total 2017 tax	5738.75

2018 tax for 40000

9525 @ 10%	9525 x 0.1	952.50
9526 to 38700 @ 12 38700 − 9525 = 29,175	29175 x .12	3501.00
38701 to 82500 40000 − 38700 = 1300	1300 x .22	286.00
	Total 2018 tax	4739.50

Difference = 2018 - 2017

$$= -999.25$$

Different percent $= \dfrac{-999.25}{2017 \, tax} \times 100$

$$= \dfrac{-999.25}{5738.75} \times 100$$

$$= -17.41$$

change sign

DifferentPercent = DifferentPercent * -1