$X = 1.3(18)$

$10X = 10 \cdot 1.3(18) =$

$= 13.(18) =$

$= 13 + 0.(18) =$

$= 13 + y$

$X = \frac{13+y}{10} = \frac{(10+3)+y}{10} = \frac{10+(3+y)}{10} = 1 + \frac{3+y}{10}$

$y = 0.(18)$

$10^2 y = 10^2 0.(18) =$

$= 18.(18) =$

$= 18 + 0.(18) =$

$= 18 + y$

$10^2 y - y = 18; \quad 10^2 y - y = (10^2 - 1)y = 99y$

$99y = 18$

$y = \frac{18}{99} = \frac{2 \cdot 9}{9 \cdot 11} = \frac{2}{11}$

$y = 0.(18) = \frac{2}{11}$

$X = 1 + \frac{3+y}{10} = (1)$

$3 + y = 3 + \frac{2}{11} = \frac{3 \cdot 11 + 2}{11} = \frac{33+2}{11} = \frac{35}{11}$

$(1) = 1 + \frac{35}{11 \cdot 10} = 1 + \frac{5 \cdot 7}{11 \cdot (2 \cdot 5)} = 1 + \frac{7}{11 \cdot 2} = 1 + \frac{7}{22}$

$X = 1.3(18) = 1 + \frac{7}{22}$

$X = 1.32(1)$

$10^2 X = 10^2 \cdot 1.32(1) =$

$= 132.(1) =$

$= 132 + 0.(1) =$

$= 132 + y$

$X = (32+y)10^{-2} = \frac{132+y}{100} = \frac{(100+32)+y}{100} = \frac{100+(32+y)}{100} =$

$= 1 + \frac{32+y}{100}$

$y = 0.(1)$

$10y = 10 \cdot 0.(1) =$

$= 1.(1) =$

$= 1 + 0.(1) =$

$= 1 + y$

$10y - y = 1$; $10y - y = (10-1)y = 9y$

$9y = 1$

$y = \frac{1}{9}$

$$y = 0.(1) = \frac{1}{9}$$

$X = 1 + \frac{32+y}{100} = (1)$

$32 + y = 32 + \frac{1}{9} = \frac{32 \cdot 9 + 1}{9} = \frac{9 \cdot 32 + 1}{9} = (2)$

$9 \cdot 32 = 9 \cdot (30+2) = 9 \cdot 30 + 9 \cdot 2 = 270 + 18 = 288$

$(2) = \frac{288+1}{9} = \frac{289}{9}$

$(1) = 1 + \frac{289}{9 \cdot 100} = 1 + \frac{289}{900}$

$$X = 1.32(1) = 1 + \frac{289}{900}$$

$X = 1.32(18)$

$10^2 X = 10^2 \cdot 1.32(18) =$

$= 132.(18) =$

$= 132 + 0.(18) =$

$= 132 + y$

$X = (132+y)\,10^{-2} = \frac{132+y}{100} = \frac{(100+32)+y}{100} = \frac{100+(32+y)}{100} =$

$= 1 + \frac{32+y}{100}$

$y = 0.(18)$

$10^2 y = 10^2 \cdot 0.(18) =$

$= 18.(18) =$

$= 18 + 0.(18) =$

$= 18 + y$

$10^2 y - y = 18 \;;\; 10^2 y - y = (10^2 - 1)y = 99y$

$99y = 18$

$y = \frac{18}{99} = \frac{2 \cdot 9}{9 \cdot 11} = \frac{2}{11}$

$y = 0.(18) = \frac{2}{11}$

$X = 1 + \frac{32+y}{100} = (1)$

$32 + y = 32 + \frac{2}{11} = 2 \cdot 16 + 2 \cdot \frac{1}{11} = 2\left(16 + \frac{1}{11}\right) =$

$= 2\,\frac{16 \cdot 11 + 1}{11} = (2)$

$16 \cdot 11 = 16(10+1) = 16 \cdot 10 + 16 = 160 + 16 = 176$

$(2) = 2 \cdot \frac{176+1}{11} = \frac{2 \cdot 177}{11}$

$(1) = 1 + \frac{2 \cdot 177}{11 \cdot 100} = 1 + \frac{2 \cdot 177}{11 \cdot (2 \cdot 50)} = 1 + \frac{177}{11 \cdot 50} =$

$= 1 + \frac{177}{550}$

$X = 1.32(18) = 1 + \frac{177}{550}$