

$$1) y = 45$$

$$2) x = 30$$

$$3) 45/2 = 22 \quad 1$$

$$22/2 = 11 \quad 0$$

$$11/2 = 5 \quad 1$$

$$5/2 = 2 \quad 1$$

$$2/2 = 1 \quad 0$$

$$1/2 = 0 \quad 1$$

$$45_{10} = 101101_2$$

$$4) 30/2 = 15 \quad 0$$

$$15/2 = 7 \quad 1$$

$$7/2 = 3 \quad 1$$

$$3/2 = 1 \quad 1$$

$$1/2 = 0 \quad 1$$

$$30_2 = 11110_2$$

$$5) x + y = 101101_2 + 11110_2 = 1001011_2$$

$$6) x - y = 101101_2 - 11110_2 = 11011_2$$

$$7) x : y = 101101_2 : 11110_2 = 1.5$$

$$8) x \cdot y = 101101_2 \cdot 11110_2 = 110111110_2$$

$$9) k = 60$$

$$10) 60_{10} = 3C_{16}$$

$$\begin{array}{r|l} 60 & 16 \\ -48 & 3 \\ \hline 12 & \end{array}$$