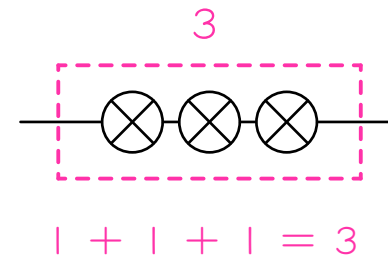
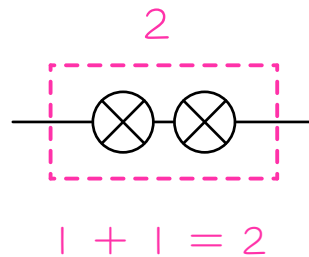
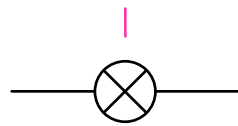


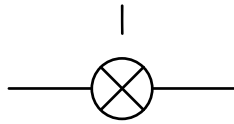
# 合成抵抗の求め方①：直列つなぎ



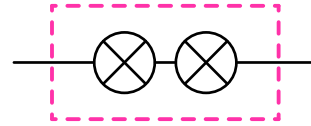
直列 → 合成抵抗 = 各抵抗の和

かんたん！

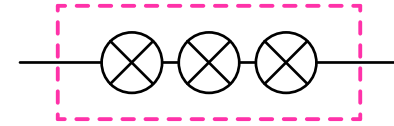
問 豆電球 1 個の抵抗を「1」としたとき、点線で囲まれた部分の合成抵抗を求めなさい。



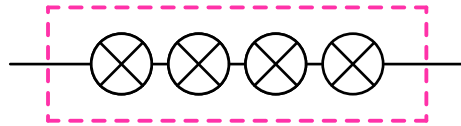
(1)



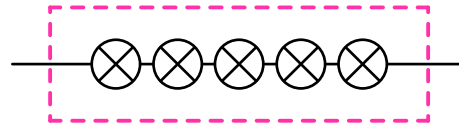
(2)



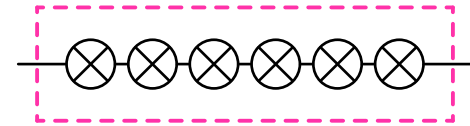
(3)



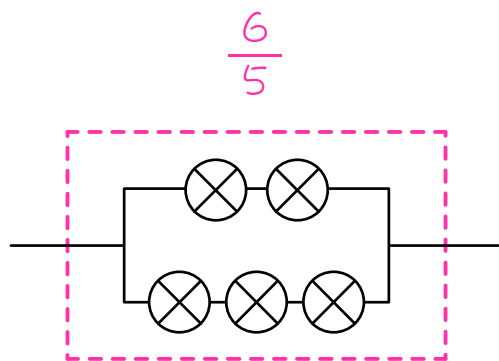
(4)



(5)

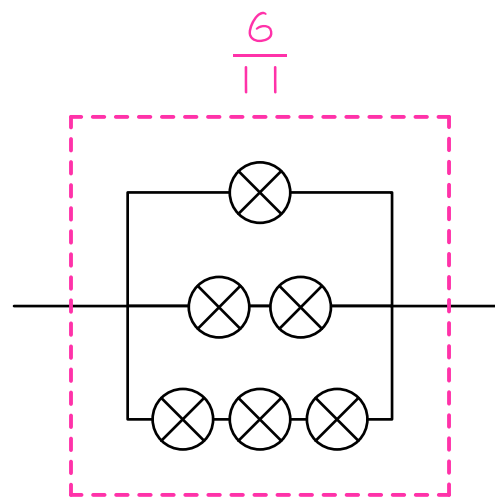


## 合成抵抗の求め方②：並列つなぎ



$$\frac{1}{2} + \frac{1}{3} = \frac{5}{6} \rightarrow \frac{6}{5}$$

逆数

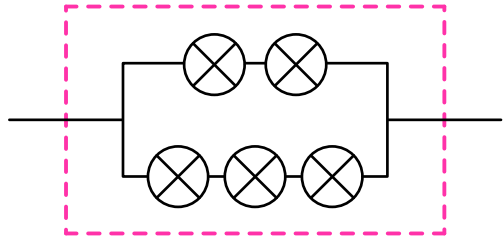


$$1 + \frac{1}{2} + \frac{1}{3} = \frac{11}{6} \rightarrow \frac{6}{11}$$

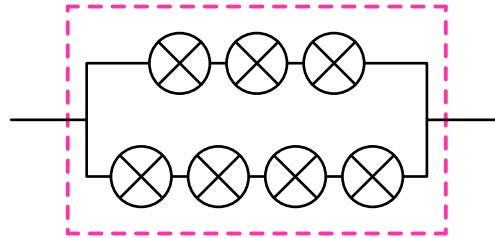
最後にひっくり返すのを忘れない！

並列 → 合成抵抗 = 逆数の和の逆数

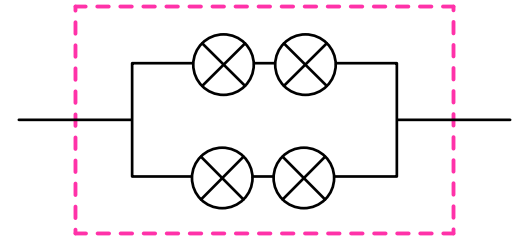
(6)



(7)

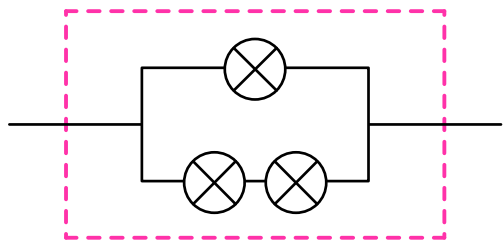


(8)

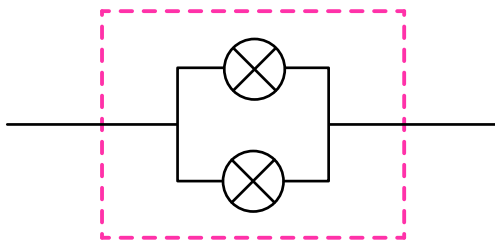


(9)

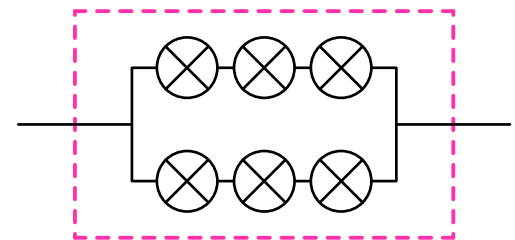
1の逆数は1



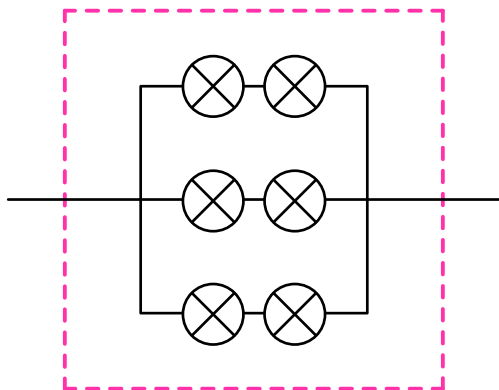
(10)



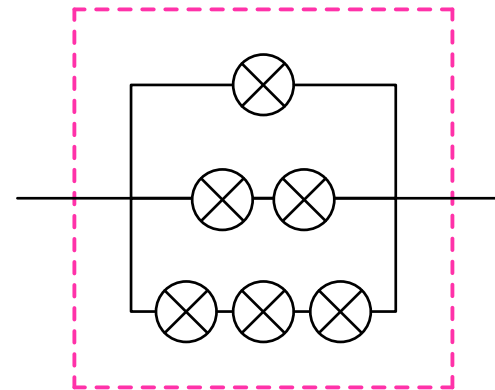
(11)



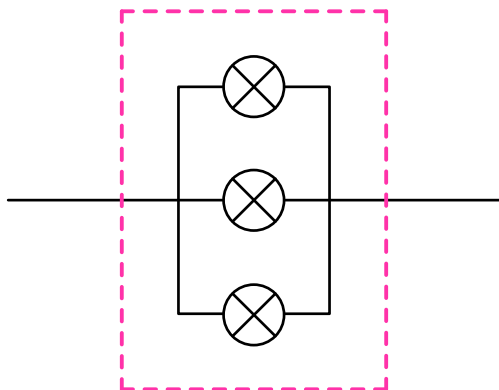
(12)



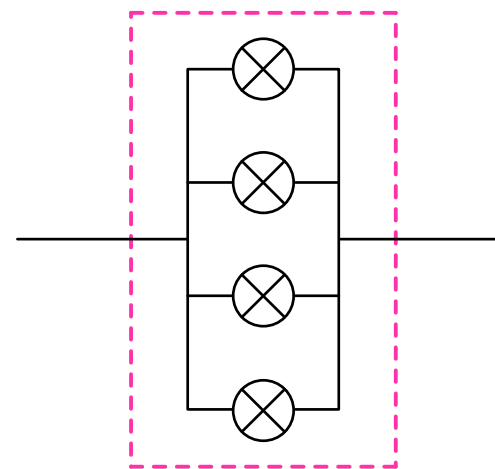
(13)



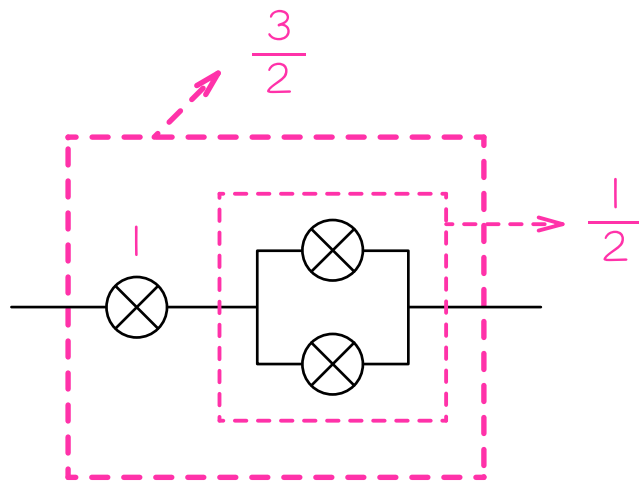
(14)



(15)

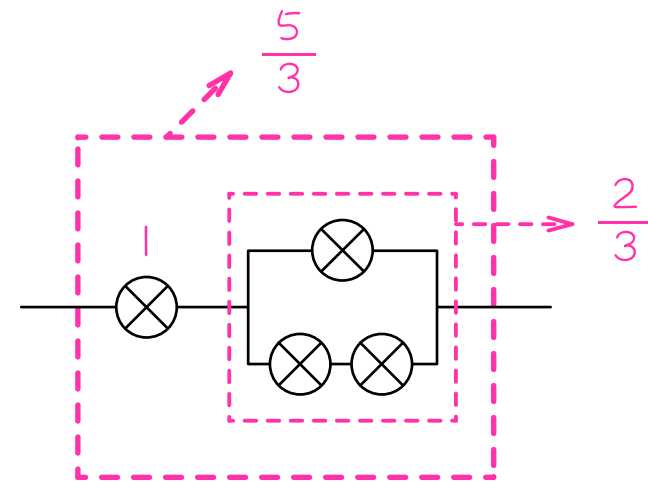


# 合成抵抗の求め方③：さらに合成



並列部分の合成抵抗が $\frac{1}{2}$ だから

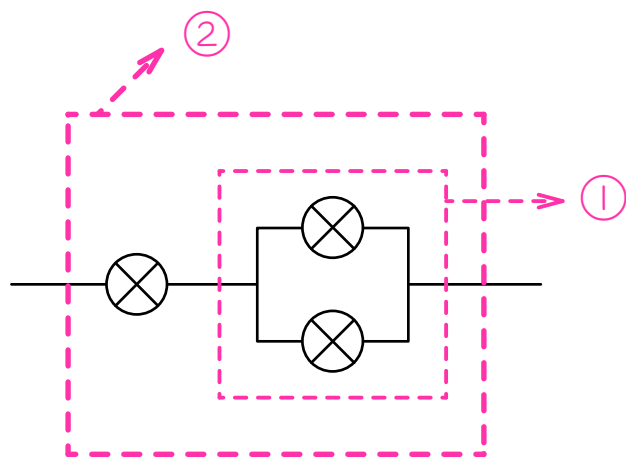
$$1 + \frac{1}{2} = \frac{3}{2}$$



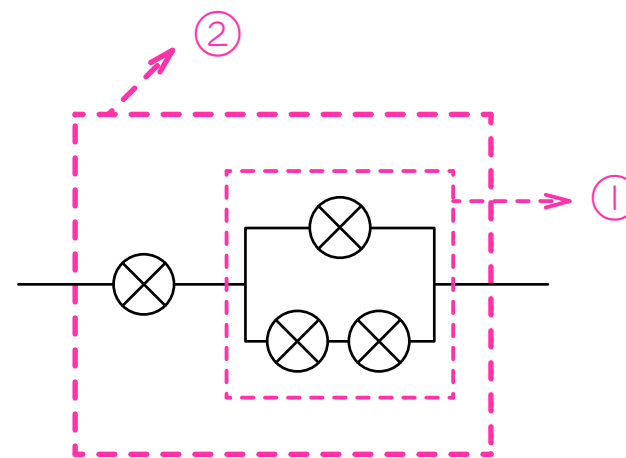
並列部分の合成抵抗が $\frac{2}{3}$ だから

$$1 + \frac{2}{3} = \frac{5}{3}$$

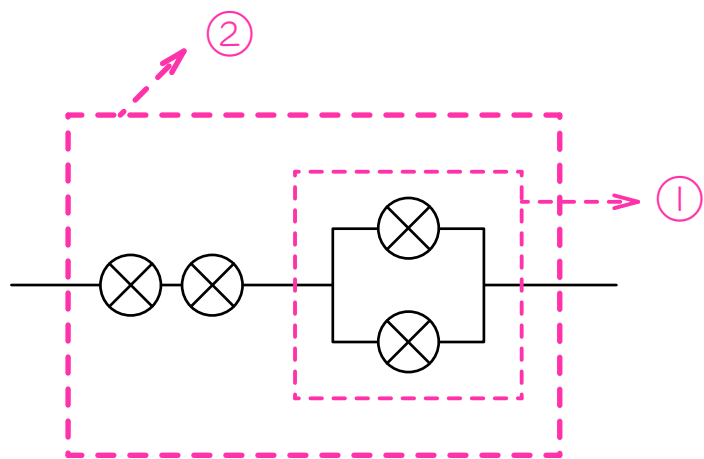
(16)



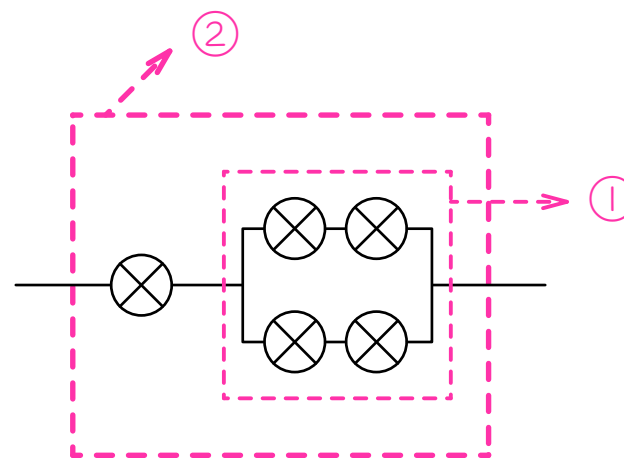
(17)



(18)

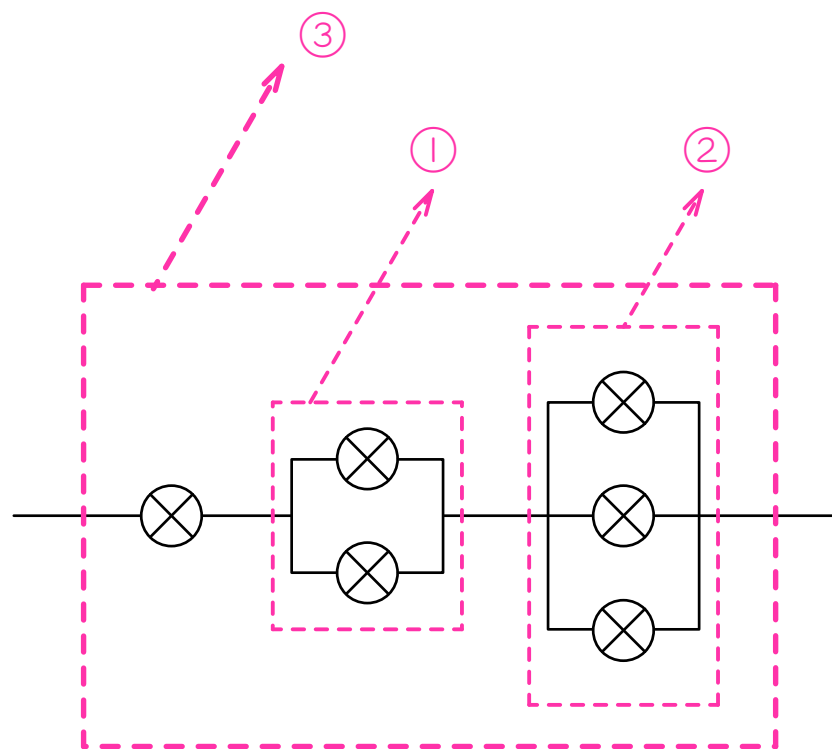


(19)





(20)



$$(1) \quad 2 \quad (2) \quad 3 \quad (3) \quad 4 \quad (4) \quad 5 \quad (5) \quad 6$$

$$(6) \quad \frac{1}{2} + \frac{1}{3} = \frac{5}{6} \rightarrow \frac{6}{5} \quad (7) \quad \frac{1}{3} + \frac{1}{4} = \frac{7}{12} \rightarrow \frac{12}{7}$$

$$(8) \quad \frac{1}{2} + \frac{1}{2} = 1 \rightarrow 1 \quad (9) \quad 1 + \frac{1}{2} = \frac{3}{2} \rightarrow \frac{2}{3}$$

$$(10) \quad 1 + 1 = 2 \rightarrow \frac{1}{2} \quad (11) \quad \frac{1}{3} + \frac{1}{3} = \frac{2}{3} \rightarrow \frac{3}{2}$$

$$(12) \quad \frac{1}{2} + \frac{1}{2} + \frac{1}{2} = \frac{3}{2} \rightarrow \frac{2}{3} \quad (13) \quad 1 + \frac{1}{2} + \frac{1}{3} = \frac{11}{6} \rightarrow \frac{6}{11}$$

$$(14) \quad 1 + 1 + 1 = 3 \rightarrow \frac{1}{3} \quad (15) \quad 1 + 1 + 1 + 1 = 4 \rightarrow \frac{1}{4}$$

$$(16) \quad \textcircled{1} \quad \frac{1}{2} \quad \textcircled{2} \quad 1 + \frac{1}{2} = \frac{3}{2} \quad (17) \quad \textcircled{1} \quad \frac{2}{3} \quad \textcircled{2} \quad 1 + \frac{2}{3} = \frac{5}{3}$$

$$(18) \quad \textcircled{1} \quad \frac{1}{2} \quad \textcircled{2} \quad 2 + \frac{1}{2} = \frac{5}{2} \quad (19) \quad \textcircled{1} \quad 1 \quad \textcircled{2} \quad 1 + 1 = 2$$

$$(20) \quad \textcircled{1} \quad \frac{1}{2} \quad \textcircled{2} \quad \frac{1}{3} \quad \textcircled{3} \quad 1 + \frac{1}{2} + \frac{1}{3} = \frac{11}{6}$$