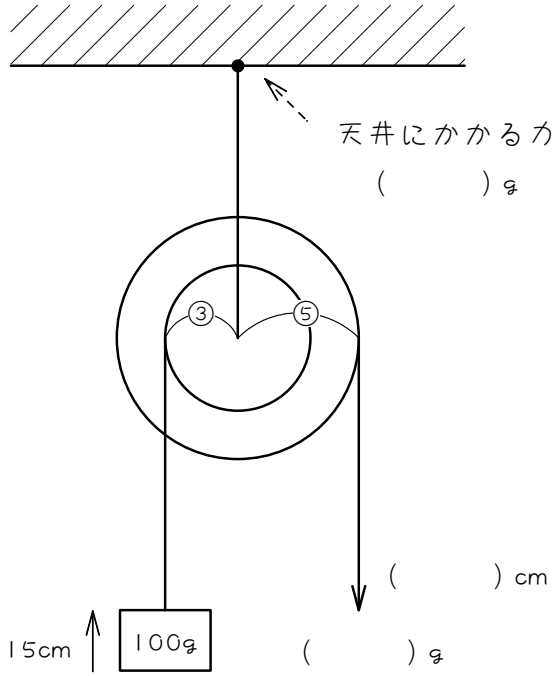
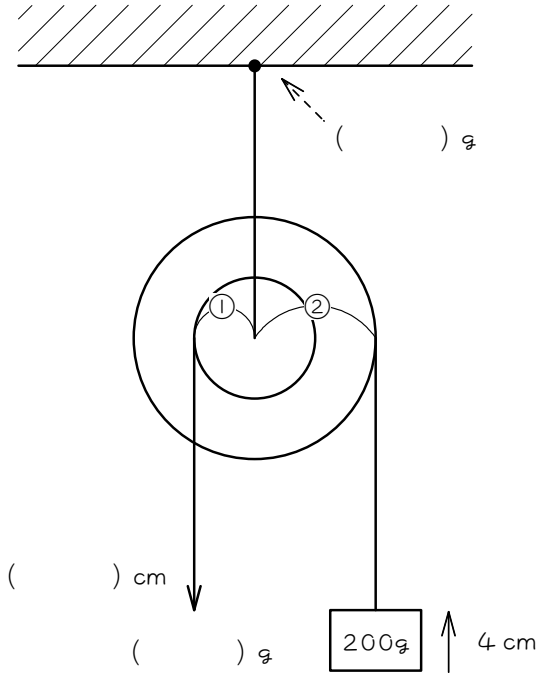
問　次の(　　)にあてはまる数を求めなさい。ただし、問題に指定のない場合は、輪じくの重さは考えなくてもよいものとします。

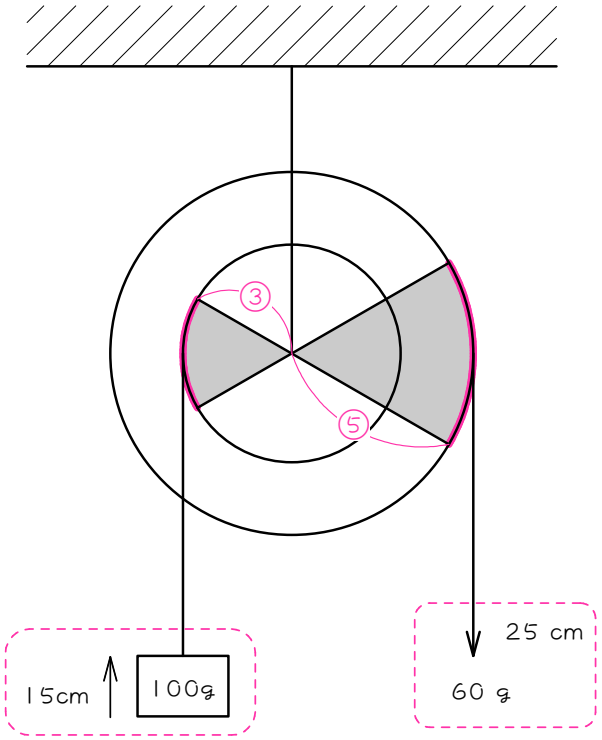
(1)　**＜輪じくの基本：てこの原理＞**




(2)



# 輪じくのひもの移動距離の求め方

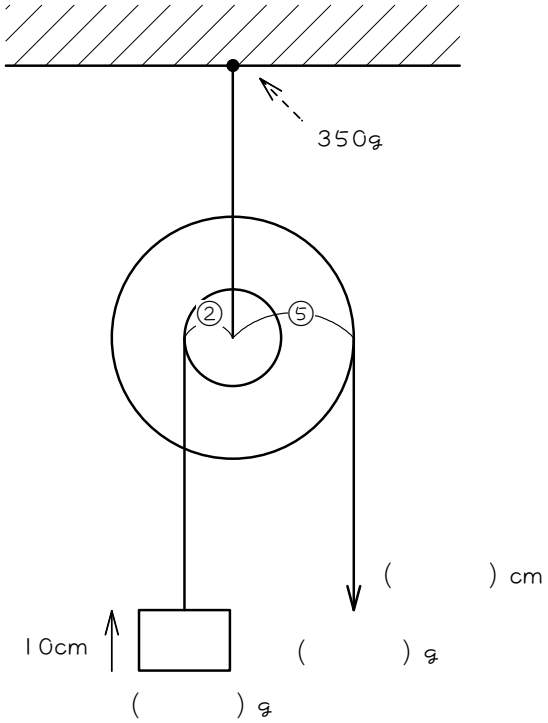



輪じくは、大きい円と小さい円が軸の部分で合体していますから、大きい円と小さい円は必ず同じ角度だけ回ります。

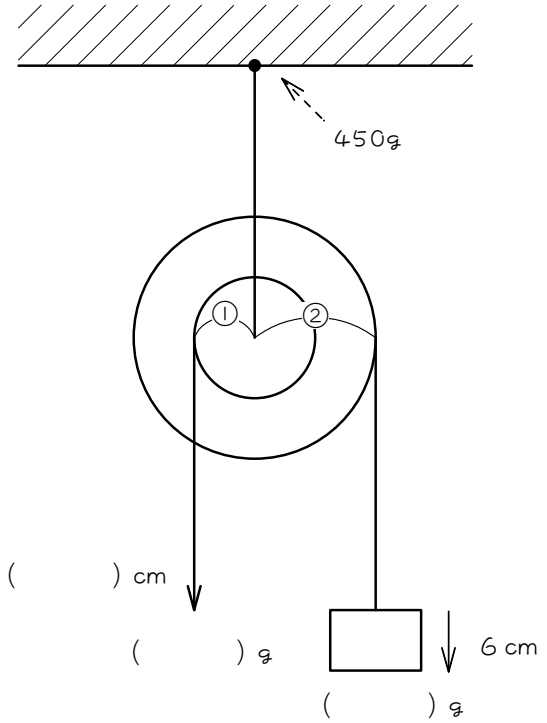
したがって、ちょうちょ相似により、ひもの移動距離は半径の比に等しくなります。

また、仕事の原理を利用して求めてもよいでしょう。

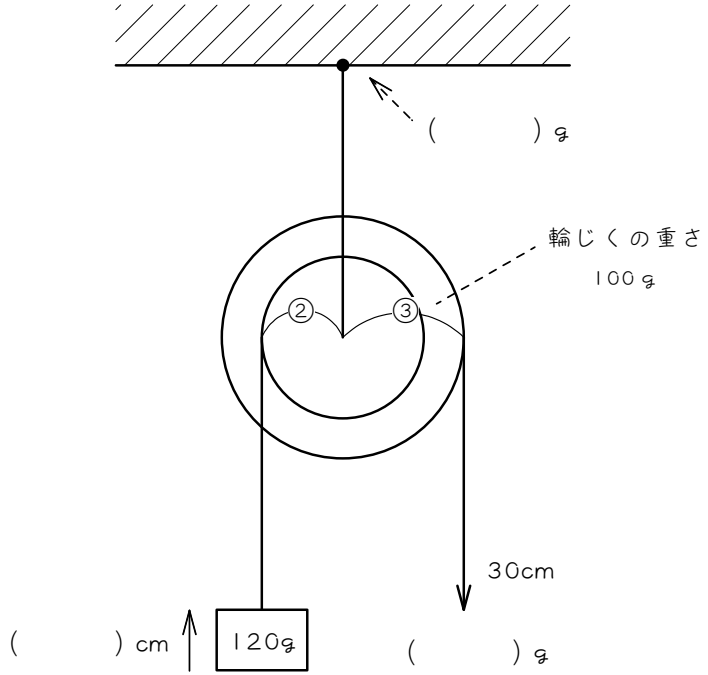
(3)



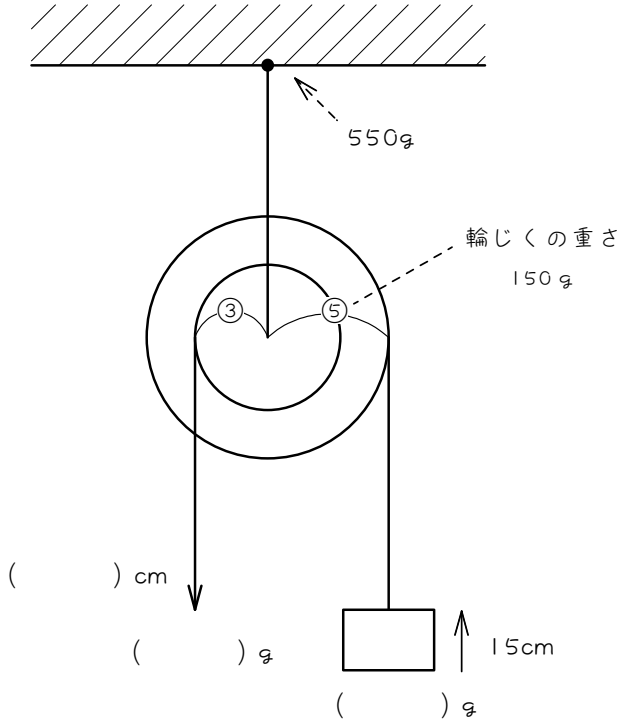

(4)



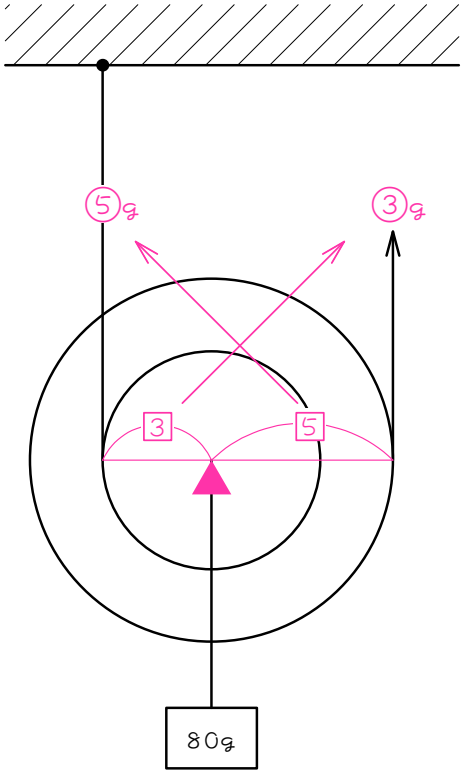
(5)




(6)



# 逆さ輪じく → 逆比で比例配分




てこの問題と同じで、逆比で比例配分。

⑤＋③＝⑧

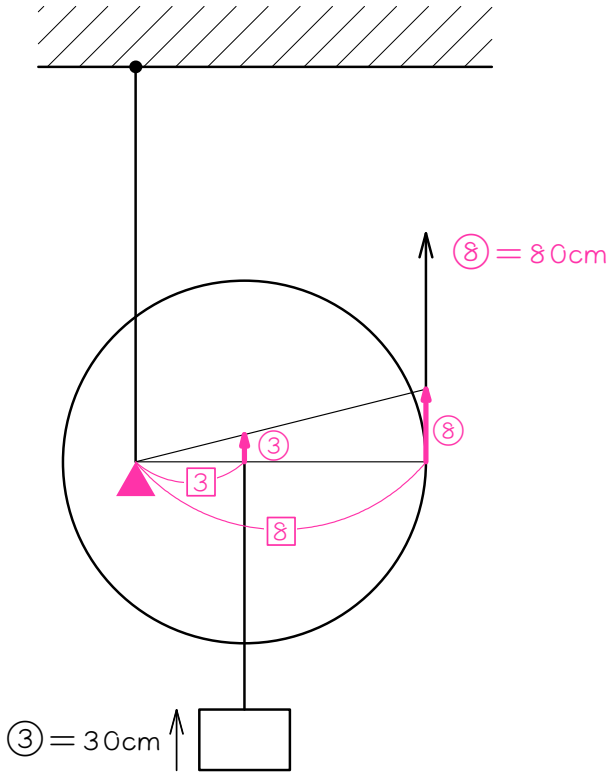
⑧＝80g

①＝10g

③＝30g

⑤＝50g

# 逆さ輪じくのひもの移動距離

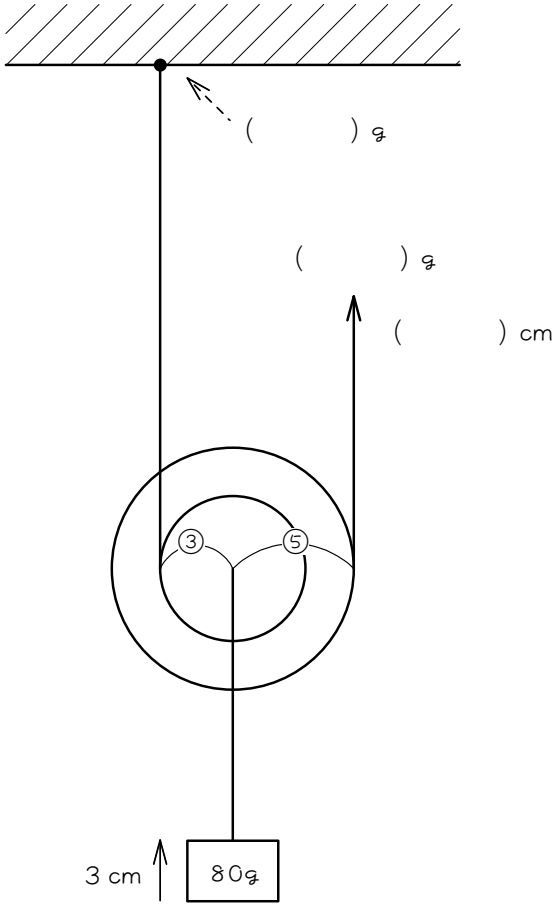



逆さ輪じくのひもの移動距離の問題は、支点を端にすることで、ピラミッド相似の問題になります。

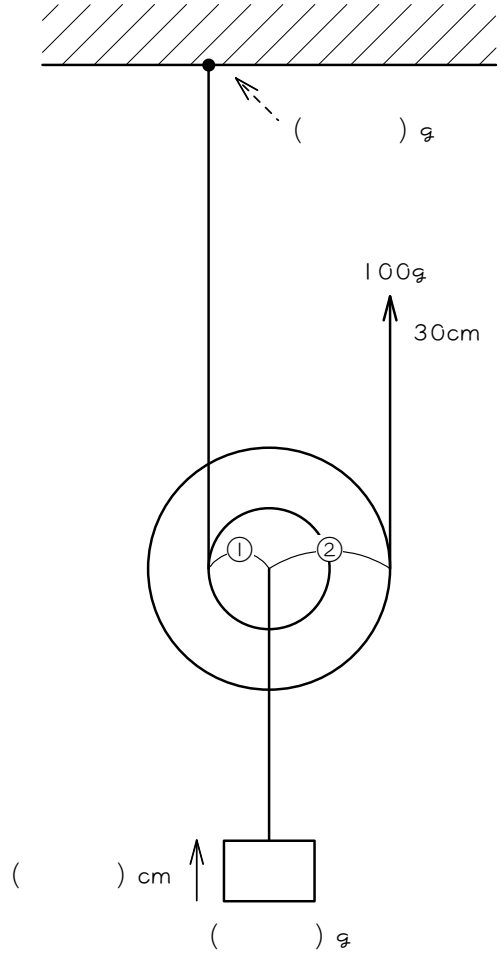
③＝30cm
①＝10cm
⑧＝80cm

仕事の原理を利用しても求めることが出来ますが、仕事の原理を利用する場合、「力(g)」の値は、輪じくの重さを考えない場合で計算しないといけません。

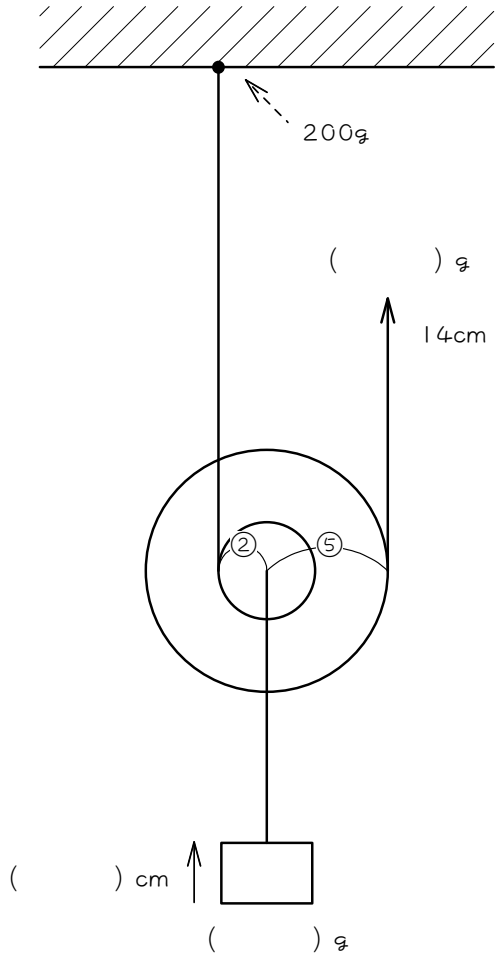
(7) **<逆さ輪じく>**



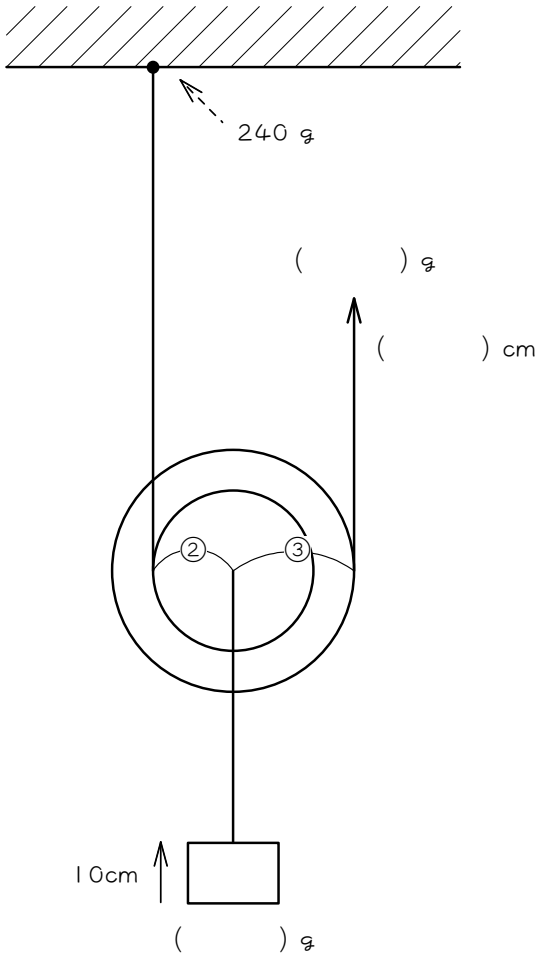

(8)



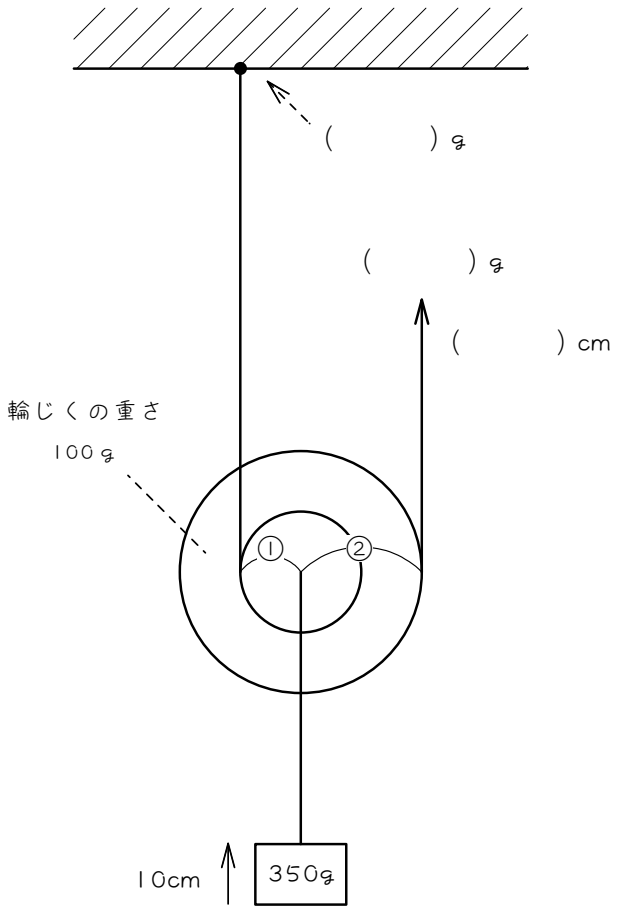
(9)



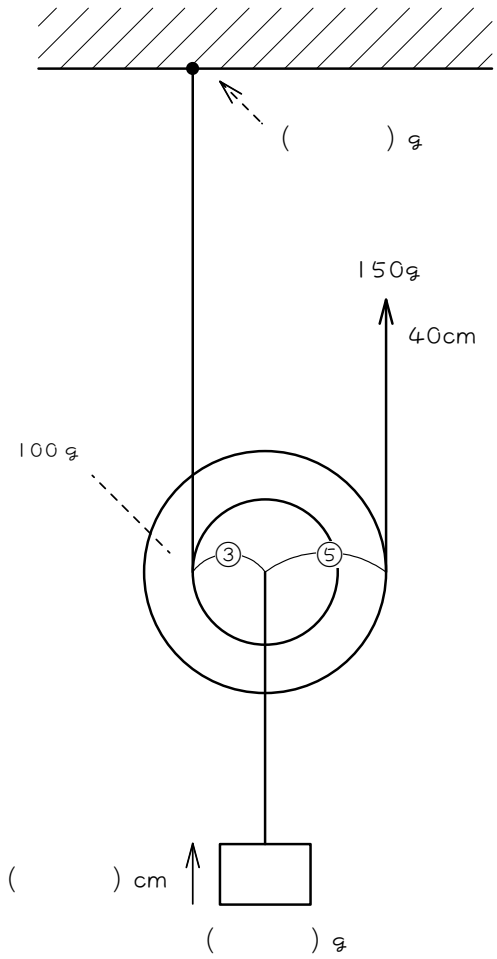

(10)



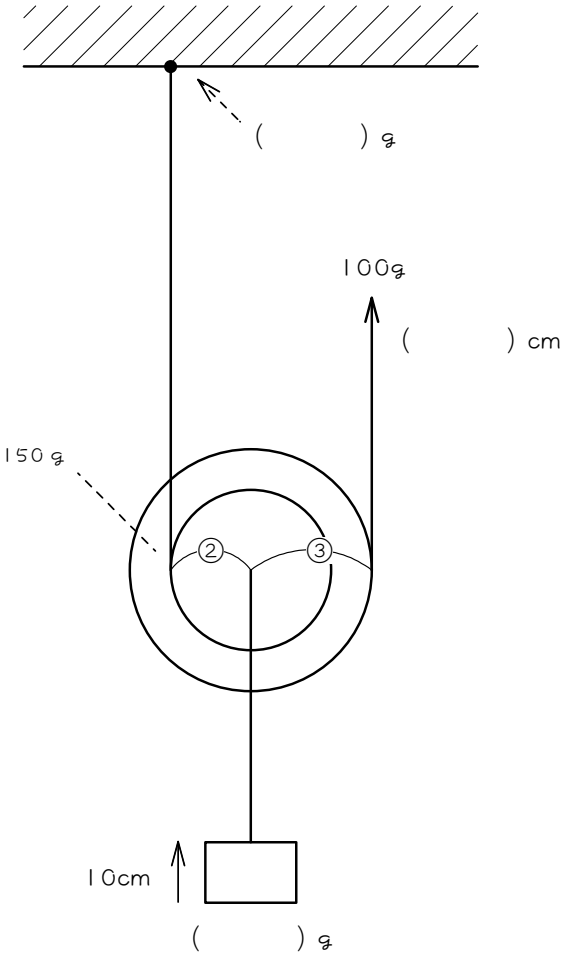
(11)



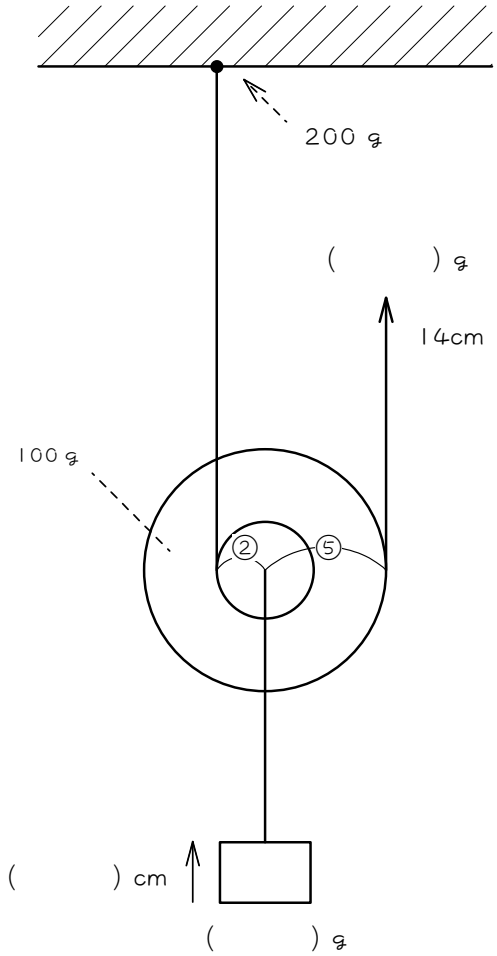

(12)



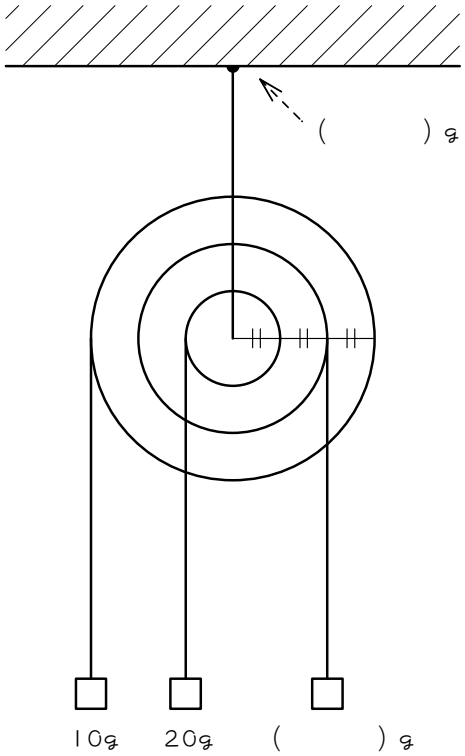
(13)



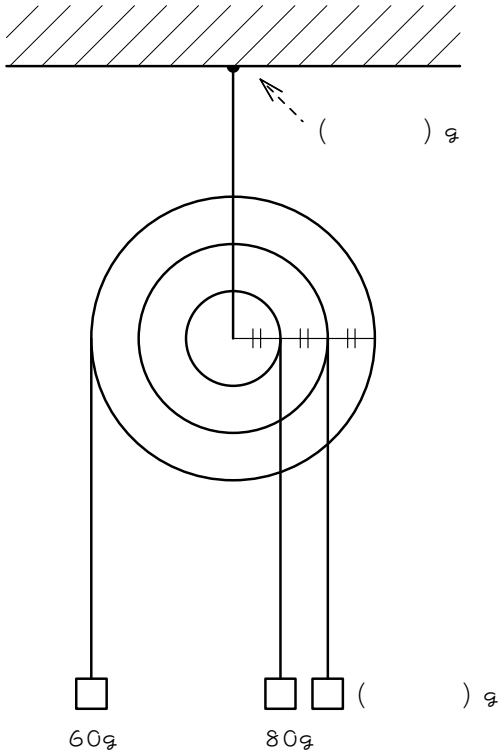

(14)



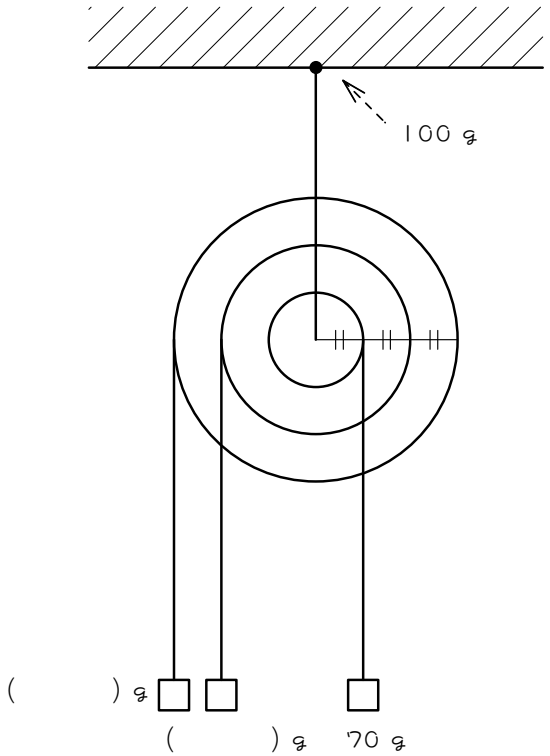
(15)




(16)

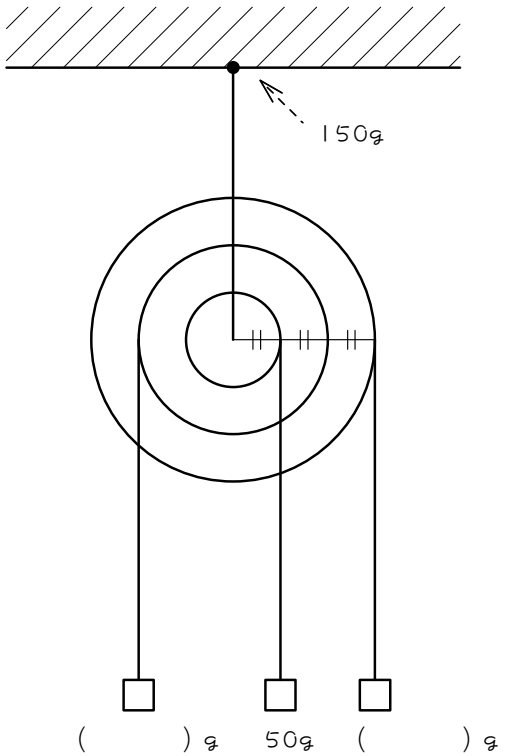


(17) **<支点の移動>**

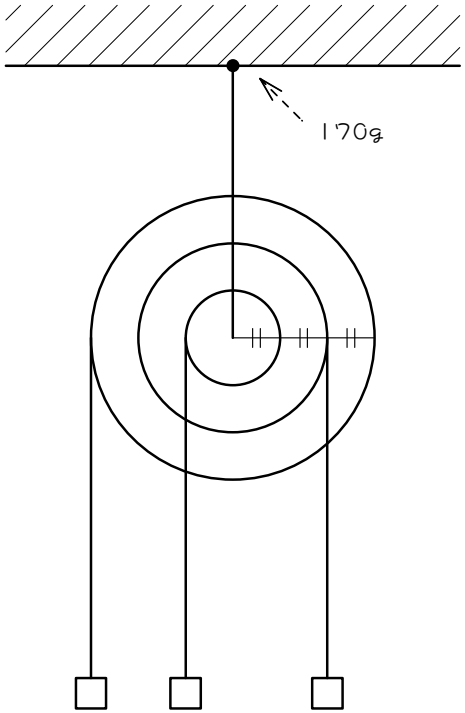



つり合っているてこは、
支点をどこにとっても構いません。

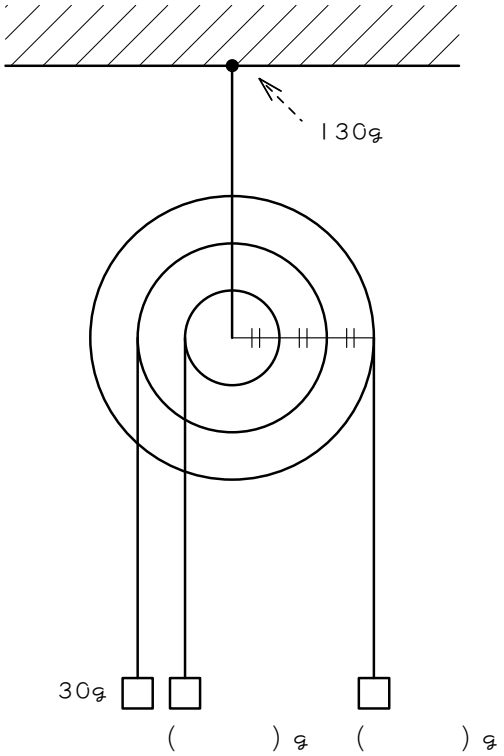
(18)



(19)

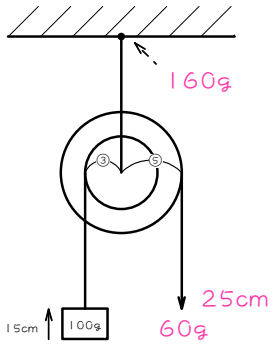



(20)

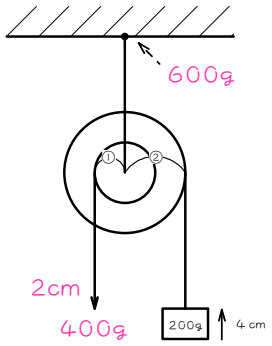


# 輪じく(1)

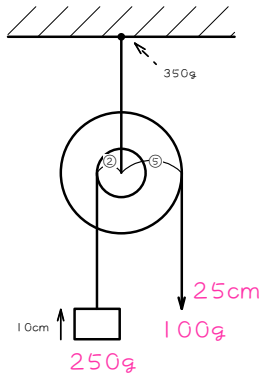
(1)



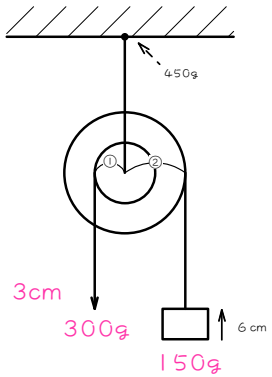

(2)



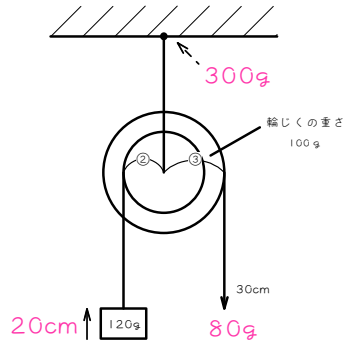

(3)



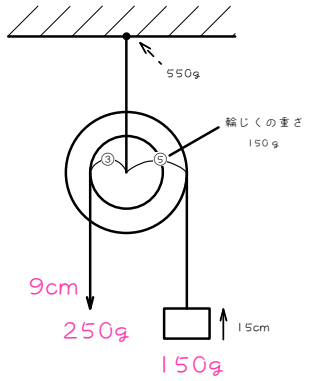

(4)



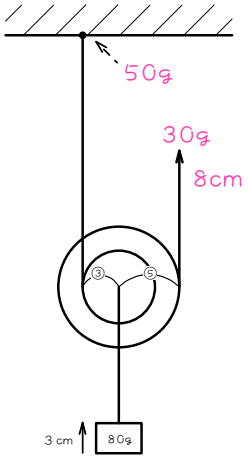

(5)



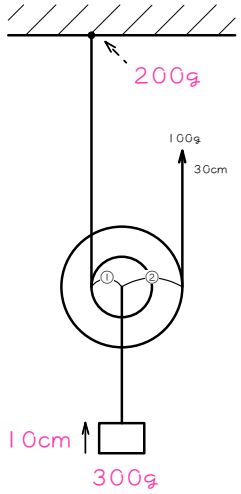

(6)



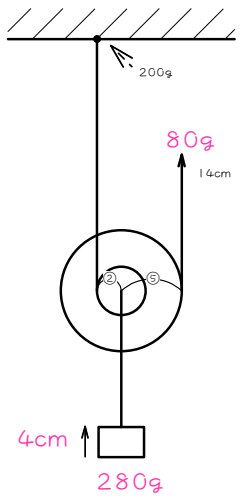

(7)



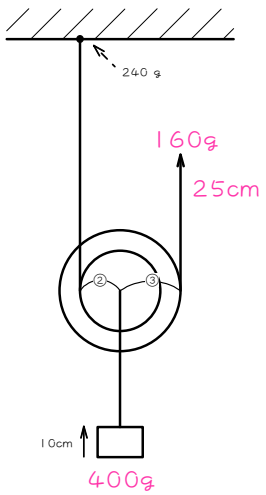

(8)



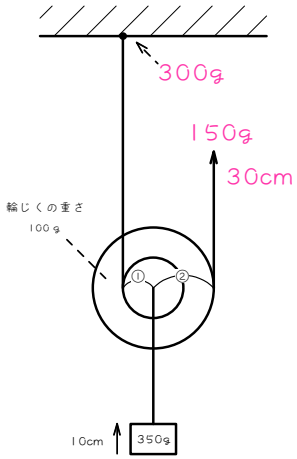
(9)



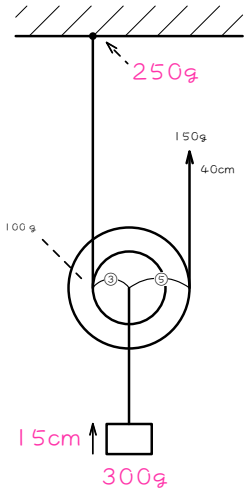

(10)



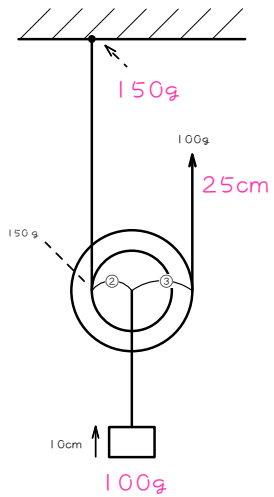

(11)



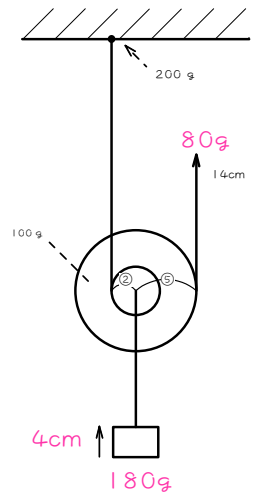

(12)



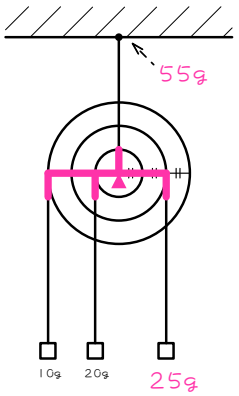

(13)



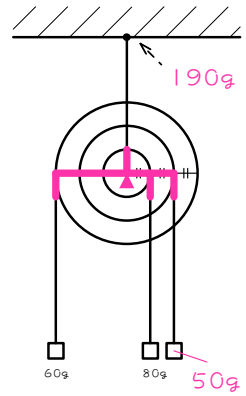

(14)



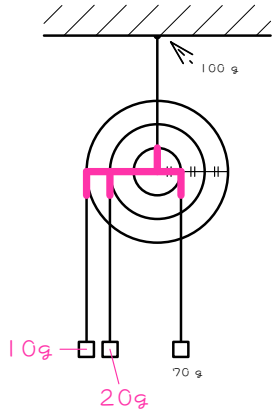

(15)

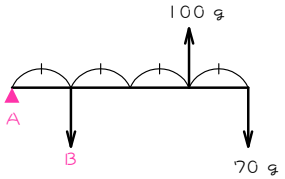



(16)



(17)




Aを支点にすると、

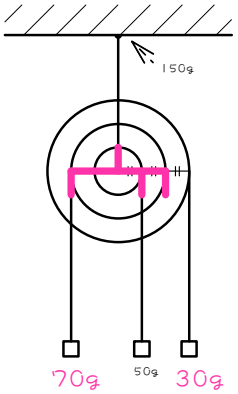
1×B＋4×70＝3×100

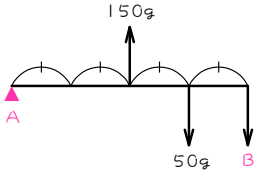
これを解いて

B＝20

A＝100－(70＋20)＝10

(18)




Aを支点にすると、

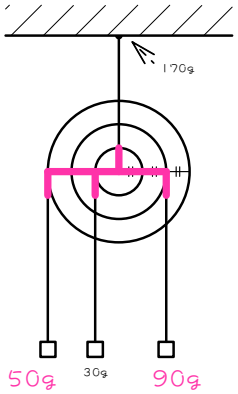
3×50＋5×B＝2×150

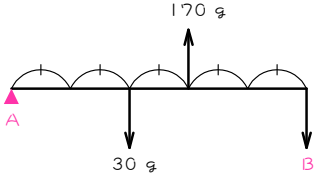
これを解いて

B＝30

A＝150-(50＋30)＝70

(19)




Aを支点にすると、

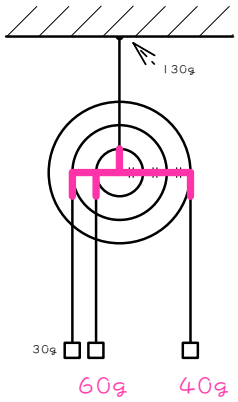
2×30＋5×B＝3×170

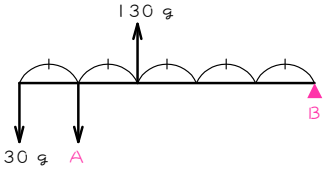
これを解いて

B＝90

A＝170-(30＋90)＝50

(20)




Bを支点にすると、

5×30＋4×A＝3×130

これを解いて

A＝60

B＝130-(30＋60)＝40